INSIDE: KEEPING CWD UNDER CONTROL

Montana Outdoors

MONTANA FISH, WILDLIFE & PARKS | $3.50

SEPTEMBER–OCTOBER 2018

SMALL CANIDS, BIG COMEBACK

SWIFT FOXES

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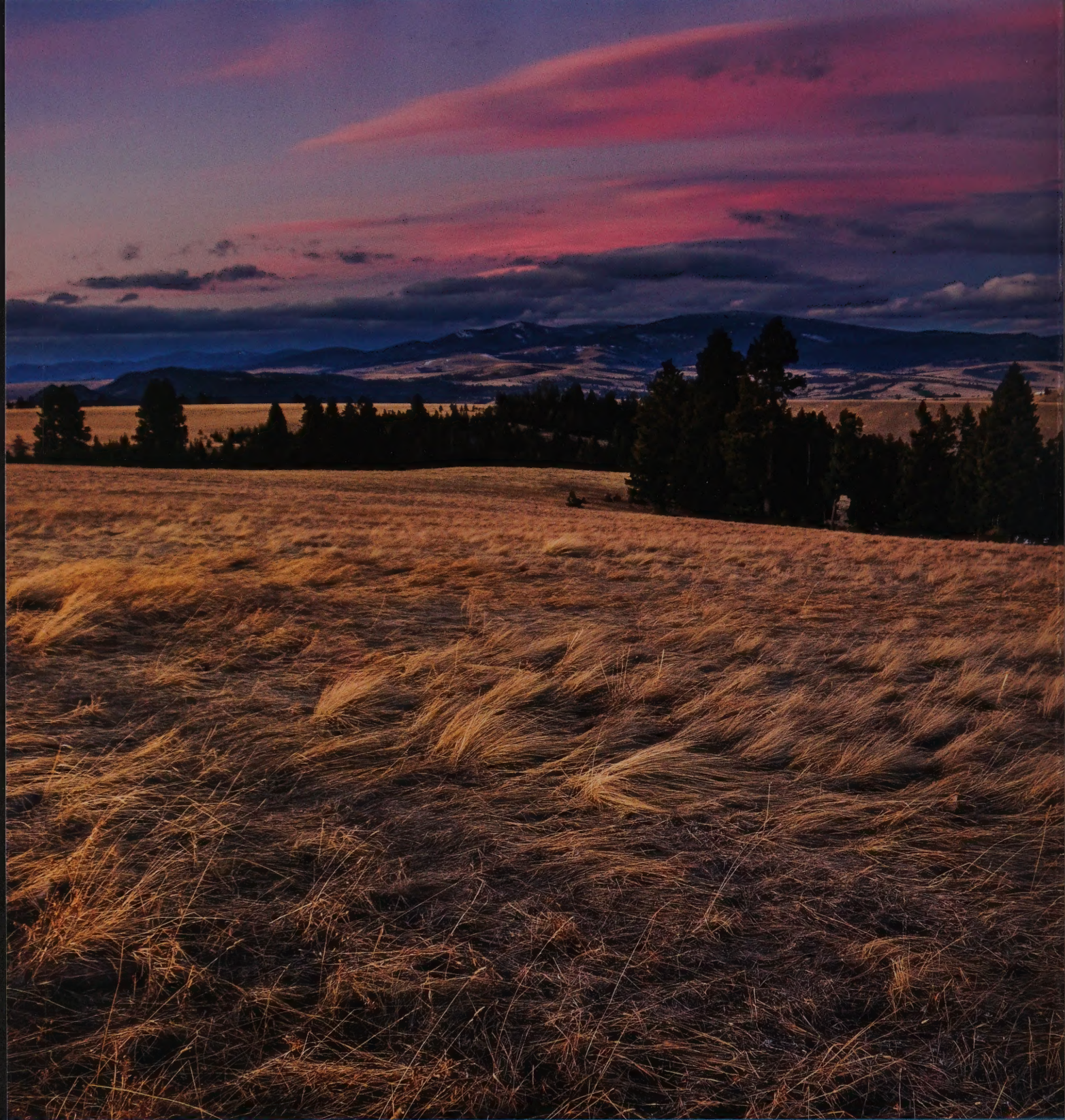
DUCK ID TIPS

LOSE 10 POUNDS BY OPENING DAY

CHECKING OUT SPOTTED DOG WMA

QUALITY OVER QUANTITY FOR UPLAND HABITAT LEASES



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Montana Outdoors

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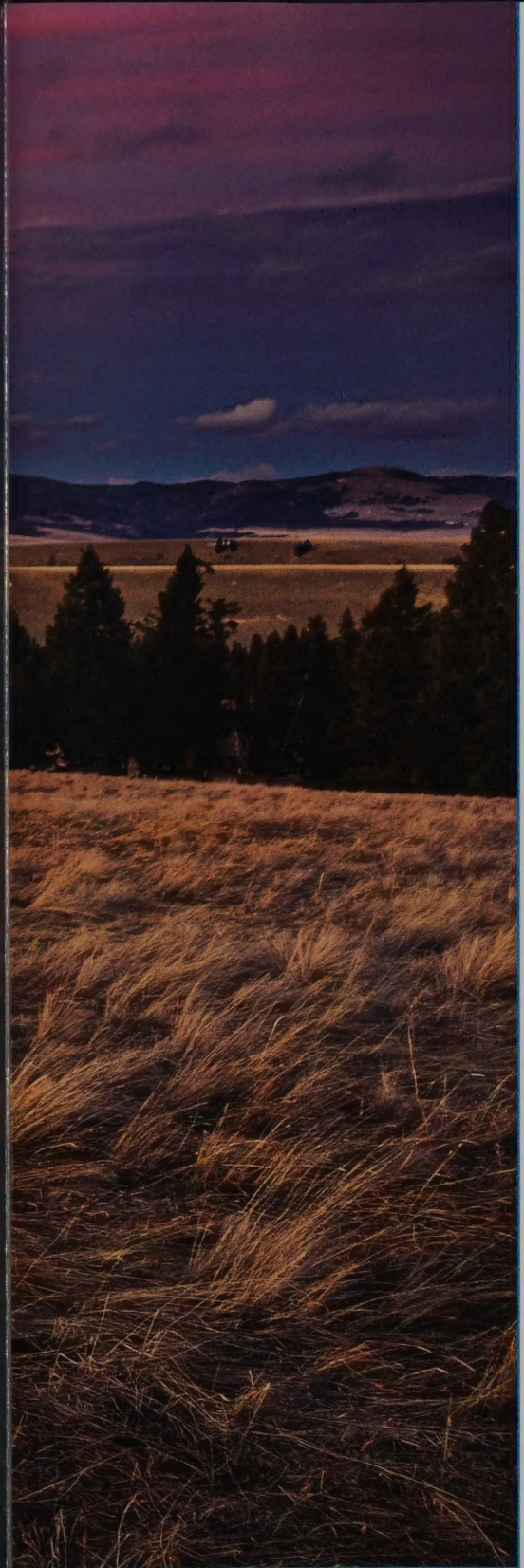


MOUNTAIN GRASSLAND PARADISE Spotted Dog WMA, near Deer Lodge, offers hunters and wildlife watchers access to remarkably diverse wildlife populations. See page 20 to learn how FWP acquired the property and how hunters and others can access it. Photo by Paul Queneau.

FRONT COVER Young swift foxes play near a den in Blaine County. Turn to page 26 to read what biologists are learning about Montana's smallest canid. Photo by Craig Miller.

Passing it on

I want to thank everyone at your magazine for your great work. Your last issue (July-August 2018) gave me a beautiful moment with my six-year-old granddaughter. We were looking through the magazine together (which we often do), and she responded with great enthusiasm to the story and photos in "Intact," about the program and people behind the 10-year project to save the westslope cutthroat trout in the South Fork Flathead River. Both of us were riveted by the photo on page 11, a spectacular image of a golden, speckled fish in its river environment, and we were pleased knowing that people were working hard to preserve it. It was really touching to hear my granddaughter's reaction to the photos of those who worked hard to save the trout. Our precious, non-replaceable inheritance of biodiversity is something I want to give her, and I also want to pass on a reverence and love for nature, and knowledge that it has to be protected. Reading that article together and hearing her reaction, I felt like, "Yes, this is happening."

Tamara Hauge
Salt Lake City, UT

Visionary

I was just reading the July-August issue and got an immediate smile seeing the photo of the disc golf course at Makoshika State Park ("Snapshot"). I was the park manager at Makoshika from 1996 through 2001. The disc golf course was the result of a grocery store conversation with Fred Unmack in 1998. Fred thought it would be a great event for the park's annual Buzzard Day event. The course really took shape as we learned how to play and eventually purchased real "folf" discs. Playing disc golf across the badlands is a unique experience. The first tournament included a deluge thunderstorm that had the coulee running three feet deep in water.

Chris Lorentz
Seeley Lake

INTACT

How a 10-year FWP project protects one of the nation's largest populations of pure-strain westslope cutthroat trout. By Brett Lorner

When Kalispell angler Tony Anderson hiked into the Jewel Basin Area with Montana Fish, Wildlife & Parks biologists on the first day of August 2008, he was excited for the trip. "I figured it was a dead head of winter," he says. FWP had treated the lakes two years earlier with a fish rotenone, removing the existing non-native fish, and stocked it with pure-strain westslope cutthroat trout. Anderson and many others had championed the ambitious plan to reestablish westslope cutthroat populations at 21 remote, high mountain lakes. They feared the project would mean the creation of more-and-easier anglers' license dollars.

But at Buddies Lake, Anderson reeled a fisheries technician left a fast-much not wriggling with aquatic insects. He was finger-swimming in the shallows. Once he began to fish, on his second cast he hooked and landed a 17-inch pure-strain westslope. "It was so beautiful, and so fat from all the food in the water," Anderson says. "I sat down on the shore, actually shaking with excitement. They were right. The project was a huge success."

Now that the 10-year South Fork Flathead Westslope Cutthroat Trout Conservation Program is complete, Anderson and others acknowledge that the controversial project has protected the river's nationally renowned pure-strain westslope cutthroat trout fishery. A joint project of FWP, the U.S. Forest Service (USFS), and the Bonneville Power Administration, it has also created strongholds of Montana's state fish in 21 lakes—sources of trout that could be used for future restoration efforts. What's more, the project neither created ecological havoc nor drained the FWP fisheries budget.

There is Montana-sanctioned outstanding conservation about this. The largest westslope cutthroat trout restoration in history, the project received a $400,000 matching grant from the National Fish and Wildlife Foundation, which called the river's cutthroat trout "a genetic conservation facility" for

Another way to save birds

In the sidebar in your article on the Migratory Bird Treaty Act, FWP director Martha Williams expresses disappointment that the act will no longer allow prosecution of companies if "underlying purposes of that activity is to not take birds." Our great standard of living has costs, unfortunately. If Ms. Williams and others do not want this problem, they should park their cars, turn off power to their homes, and stop using all products and services that are produced and made from electricity and hydrocarbons. Then we will need less of those products and services and therefore save more birds.

Jake Nelson
Spokane, WA

Concerned about cuts

In response the FWP director Martha Williams's "Our Point of View" column on Fisheries Division budget cuts (May-June), I have grievous concerns about how cuts to the hatchery program have been targeted toward three of Montana's top angling destinations. Rainbow trout stocking rates at Canyon Ferry, Hauser, and Holter Reservoirs are being slashed by 50 percent. Combined, these reservoirs account for nearly 10 percent all angling in Montana and more than twice as much as Fort Peck. Of that use, 60 percent of the anglers target rainbow trout. Though these cuts are painful, what is more painful is that cuts to the warmwater sector of the hatchery program will be minimal to none at all. Why were these budget cuts not spread equally among all hatcheries in the system?

Pete Cardinal
Wolf Creek

EILEEN RYCE, HEAD OF THE FWP FISHERIES DIVISION, replies: We definitely recognize the enormous recreational importance of the Upper Missouri River reservoir trout fisheries. But we had to cut our budget last year by $2.2 million. As part of those reductions, we reduced fish production and made cuts to several other important fisheries management programs. As we looked at where to cut, our goal was to not cut staff positions or cause irrepairable damage to any programs, fisheries, or recreational opportunities. We hope to restore trout production along with the other reduced programs during the 2019 legislative session.

Revenue idea

I just received my first copy of the magazine and am really enjoying it. As a locally elected county council chairman, I can appreciate the need to work within a tight budget and the efficiencies that a tough budget cut can force on you. I applaud FWP's ability to make hard choices regarding its fisheries budget. With that said—and I do not know the full answer—if any of your choices mean fewer opportunities to fish in your magnificent state, I would happily pay a little more for a nonresident license. Just my two cents from a southern boy who has an affinity for Montana and all it has to offer. Thanks for the work you do.

Jay Byars
Summerville, SC

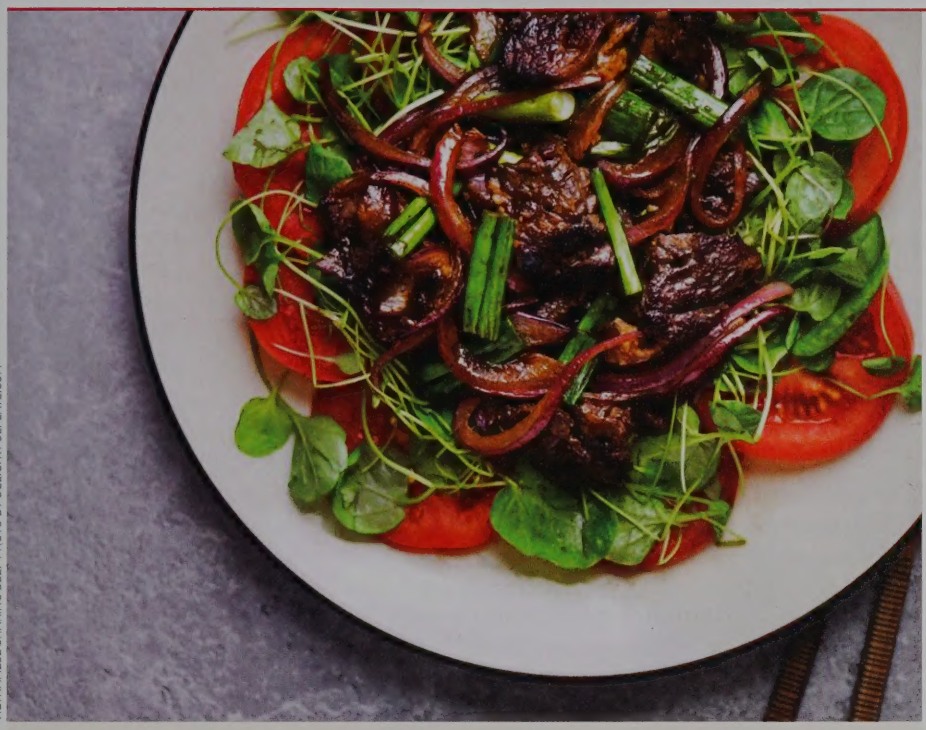
EDITOR REPLIES: A slight increase in fishing license fees is indeed one option. But even with that, declining national sales of fishing gear remains a troubling trend. Because a big portion of FWP's fisheries budget comes from a federal excise tax on that gear, the decline could hamper efforts to maintain Montana's legendary fishing unless new revenue sources are developed.

Corrections

Several readers wrote asking why the angler releasing the northern pike in the photo on page 38 of "Water Wolves" (July-August) was carrying a firearm. It turns out the photo was taken in Alaska and the gun was for grizzly bear protection. Because we aim to use photos taken only within the borders of Montana, we should have double-checked that image before publication. ■

Vietnamese Shaking Venison

By Jim Pashby | Preparation time: 10 minutes | Cooking time: 5 minutes | Serves 2–4



VIETNAMESE SHAKING BEEF PHOTO BY DELIGHTFULPLATE.COM

As temperatures begin to drop in late summer and early fall, cooks start putting away the tongs and grill mitts and start moving back inside to the kitchen. It can be a tough transition. At our house, cooking dinner on the grill is a symbol of the outdoor life that is often far too brief in Montana. Every meal cooked inside during September and October further signifies that summer is over and reminds us that soon the back porch will be covered in a foot of snow.

To make the transition easier, I prepare dishes this time of year that can't be duplicated outside. One is this easy recipe by Hank Shaw, the San Francisco–based cookbook author whose blog *Hunter Angler Gardener Cook* and dozens of game recipes have inspired and instructed thousands of new and experienced cooks across the country.

This recipe, from Shaw's latest cookbook, *Buck, Buck, Moose*, originates from the traditional Vietnamese dish Bo Luc Lac, or Shaking Beef. The name refers to how shaking the hot pan moves the meat around (though I've found that using a spatula actually works better).

An essential tip: Don't crowd the meat when cooking. Leave as much room between meat chunks as the chunks themselves. That means cooking two batches. If you crowd the meat, it steam-cooks and can't develop the crisp, dark brown crust that adds so much flavor to sauteéd meat.

Don't panic over the oyster sauce and fish sauce. Both are in the Asian section of most supermarkets and are well worth buying. They are delicious in this dish and several others in the *Montana Outdoors* archives (fwp.mt.gov/mtoutdoors). Arugula is a leafy green with a great peppery flavor that pairs well with the sweet, savory meat. So does watercress. Find either one in the produce section of major grocers.

This yummy dish takes just a few minutes to prepare. Serve it with cooked rice and a sliced tomato and red onion (or scallions), which add color to the plate and pay tribute to the summer months we are sadly leaving behind.

—Jim Pashby is a writer in Helena.

INGREDIENTS

1-1.5 lb. pounds venison loin or tenderloin, trimmed of all white bits
½ t. black pepper
1½ t. sugar
2 garlic cloves, minced or crushed
2 T. oyster sauce
2 t. fish sauce
1 T. soy sauce
6 T. vegetable oil
1 medium red onion, sliced thin
2 bunches arugula or watercress
Salt and pepper
2 t. rice or cider vinegar
1 ripe tomato, halved and sliced thin
½ red onion, sliced thin

DIRECTIONS

Cut the venison into ½- to 1-inch chunks, no larger. Mix the chunks with the black pepper, sugar, garlic, and three sauces. Marinate 1 to 4 hours.

When time to cook, add 2 T. oil to a large sauté pan and heat on high until the oil starts smoking. Add the onion and stir constantly until it begins to brown around the edges, about 2 minutes. Remove from the pan and set aside. Wipe out the pan with a paper towel.

Add another 2 T. oil and heat on high until it starts to smoke. Add half the venison in one layer, making sure the pieces are spaced, and sear for one minute without moving the meat. Quickly, using a spatula or fork, turn every piece over. Sear without moving for another minute. Remove meat, wipe pan, and repeat with the remaining 2 T. oil and other half of the venison chunks. Turn heat to low and add the onion and cooked meat to the pan. Toss to combine.

Mix the arugula or watercress with the vinegar and add a little salt and pepper. Top with the venison and serve with cooked white rice and thinly sliced tomatoes and red onion.

Educating to engage, awaken, and inspire

You'd think that in Montana, where fish and wildlife are so much a part of our heritage, culture, and daily life, kids would know what a mule deer or a trout is. But in truth, many don't.

FWP education specialists across the state report that a growing number of kids—both rural and urban—understand surprisingly little about Montana's outdoors. It could be that those children simply haven't been exposed to nature as so many of us were in the past. Whatever the reason, that lack of understanding does not bode well for Montana's future. If our kids don't know about fish and wildlife, they won't value those resources and work to sustain them, as generations of Montanans have done.

Fortunately, our department is active in schools and communities across Montana helping kids and adults gain outdoor skills and knowledge of the natural world. Our Hooked on Fishing Program teaches students in nearly 200 classrooms statewide about Montana's rivers, lakes, fish, and other aquatic life. Through FWP's Hunter and Bowhunter Education Programs, 1,500 volunteer instructors teach youth and adult hunters the basics of firearm and bowhunting safety, hunting ethics, and game animal identification. Over the past 25 years, our Becoming an Outdoors-Woman Program has introduced thousands of women to the joys of camping, canoeing, shooting, and outdoor cooking. At our Montana WILD education center in Helena, 2,500 to 4,000 school kids are bused in from across the state each year to learn about the state's mammals, fish, reptiles, and ecosystems, as well as the role that citizens play in conservation. The center also teaches thousands of other Montanans, young and old, how to fly-fish, shoot a bow and arrow, paddle a kayak, and identify dozens of bird species.

For many children across Montana, their first exposure to the natural world—like fishing, archery, or bird watching—comes from an FWP education specialist.

Among the most popular features of Montana WILD are our "ambassador" hawks, falcons, eagles, and owls. These previously wounded raptors have recovered at the adjacent FWP wildlife rehabilitation center but are unable to survive in the wild. Trained volunteers carry the birds of prey around the center, giving visitors an up-close view of wild Montana.

Much of our educational work is about unplugging kids from their cell phones and video games, inviting them outside, and showing them how to enjoy the natural world. Many kids still learn outdoor recreational skills from their parents, but a growing number don't. We fill that need. FWP programs expose many kids to their first experiences of catching a fish, holding an elk antler, or figuring out what type of bird is flying overhead. We want them to engage in the outdoors so they value and care about fish and wildlife. Then, as adults, they'll be more inclined to join us and others in caring for these resources that define Montana.

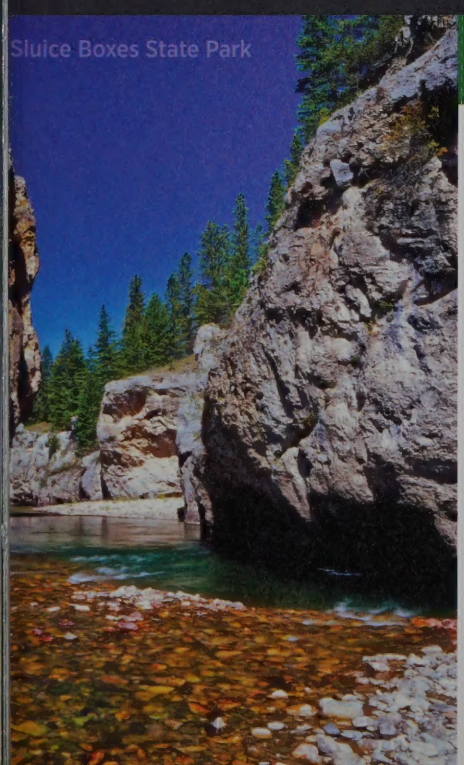
FWP's educational work isn't all foundational. We also run programs that help Montanans of all ages understand critical conservation issues. Our Bear Aware Program shows people how to reduce conflicts with grizzlies. FWP's Aquatic Invasive Species Program gives people a first-hand look at zebra mussels, demonstrates how they ruin lakes and irrigation, and explains what we all can do to stop the spread of these and other aquatic troublemakers.

One exciting recent example of an FWP educational project is the Sage-Grouse Challenge, a partnership of Montana WILD and the Missoula-based Inspired Classroom, an "interactive distance-learning" company. This year's pilot project used interactive live streaming in classrooms to connect teams of students and teachers across Montana with FWP sage-grouse experts in the field. Students learned about the iconic bird, then dove deep into the subject matter to develop land-use solutions that could help conserve the species. "The scenario was so believable that kids really bought into the challenge and were very focused on actually presenting an idea of how to best use the land," a Hamilton teacher told us.

If kids anywhere need to experience and learn about the natural world, it's here in Montana. This state is all about the outside experience—camping, fishing, hunting, boating, hiking, fishing, and more. FWP's staff is dedicated to educating communities and youth about our clean water, healthy wildlife populations, and world-renowned fisheries, and how all of us can and must work together to keep Montana a place of beauty, wonder, and opportunity.

—**Martha Williams**, Director, Montana Fish, Wildlife & Parks

THOM BRIDGE/MONTANA FWP



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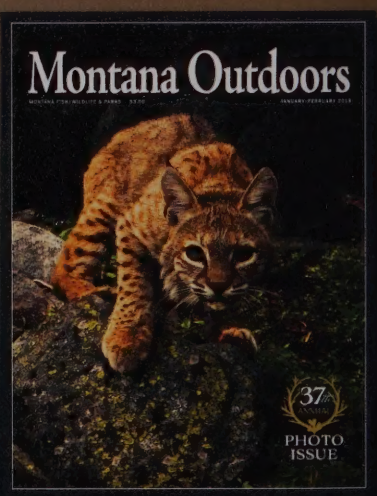

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the photo issue.
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SEAN R. HEAVEY

ALL-AROUNDER

BJ KEMP
Conservation Technician, Region 6, Glasgow

THIS IS A GREAT JOB for someone like me who enjoys working with machinery and prefers being on his own. The position is unique in FWP in that I get to work for the Wildlife, Fisheries, and Enforcement Divisions as well as help maintain the regional headquarters office. Basically I assist wherever I'm needed.

I help count sage-grouse in March, set and check walleye net traps at Fort Peck [Reservoir] in April, and spend most of the summer on fishing access sites—moving docks, painting signs, fixing broken stuff, mowing grass, grading roads, and spraying weeds. In the fall, I mainly put up sign-in boxes and install signs on the hundreds of block management areas in our region. In the winter, I'm in the shop fixing and maintaining equipment.

It's real rewarding to help out with fisheries and wildlife management and law enforcement. FWP biologists and game wardens tell me that a lot of what they do—like acquiring a wildlife management area or catching a poacher—can take months or even years to complete. I'm lucky that, at the end of each day, I get to see the results of most of my work.

SNAPSHOT

While exploring an FWP block management area south of Miles City, Billings photographer **Alexis Bonogofsky** came across this Woodhouse's toad, a small amphibian native to eastern Montana. "I was on a sandstone formation along the Tongue River, and these little two-inch-long toads were hanging out all over the place," she says. "I wanted to get a closeup of this guy, so I got down on my belly with my 50 mm lens and started shooting, closing the aperture to blur the background and foreground and put the picture's focus on the toad." Bonogofsky says that most eastern Montana photography is about big things—sky, prairie, and trophy elk, mule deer, and pronghorn. "With this shot, I wanted to focus on something small and remarkable that people generally don't even notice." ■

1 Montana's rank, among all 50 states, in the number of both hunters and wildlife watchers per capita

(Source: USFWS)

Tamarack Time

In early fall, one of Montana's most remarkable tree species announces its presence by lighting up the mountainsides. The tamarack (or, more accurately, the western larch) is the state's only conifer to change color in autumn. Unlike needles on other softwoods, those of tamaracks lose their chlorophyll this time of year, revealing yellow zanthophyll pigment before dropping to the ground. The needles grow back green each spring.

Look for gold streaks of tamarack stands in the mountains and valleys west of the Continental Divide. Seeley Lake's Tamarack Festival runs the last week of September, and Bigfork holds a Tamarack Timber Festival in mid-October. ■

You don't have to be a millionaire to hunt wild sheep in Montana—just incredibly fit and able to spend weeks in the state's most rugged terrain.

HUNTING

Easy permits, near-impossible sheep

Recent hoopla over the new world record bighorn sheep, discovered at a state park in western Montana, has further fueled interest in Treasure State wild sheep hunting.

Montana offers several options for obtaining a bighorn sheep hunting license: Pony up several hundred thousand dollars to out bid other high rollers for the special "hunt anywhere" license offered during the Wild Sheep Foundation's annual auction; win the Super-Tag "hunt anywhere" lottery (20,000 to 1 odds); or beat the odds in the 43 regular bighorn sheep district drawings (from about 100 to 1 to 1,000 to 1).

Or you can purchase a permit that's available to anyone for one of Montana's five "unlimited" sheep areas. You read correctly. Montana offers some of the nation's only over-the-counter bighorn sheep hunting permits.

There's a catch, of course. Actually, there are several.

The hunting districts, in the Gallatin, Absaroka, and Beartooth Ranges just north of Yellowstone National Park, are some of the most remote, rugged, and inaccessible areas of the northern Rockies. Sheep populations there are sparse, and rams among them are sparser still. Each of the five districts has a quota of just a few rams. When the quota is filled—sometimes just a day or two into the season—the entire district is closed.

Those with experience say that hunting the unlimited areas requires months of planning, weeks of scouting, and extraordinary physical fitness and backcountry skills. On their own hunts, they often spent a week or more without seeing any sheep, or saw only herds with no legal rams.

This is also prime grizzly country.

Still, the hunts are not impossible. Every year a few hunters fill their tags, some with big rams. In 2016, a hunter killed an 8.5-year-old ram in one of the unlimited areas.

Permit applications are due by May 1, 2019 (all who apply receive one). The hunting season starts September 1. That gives you a year to plan, apply, scout, amd get yourself fit enough to tackle Montana's toughest hunt. ■

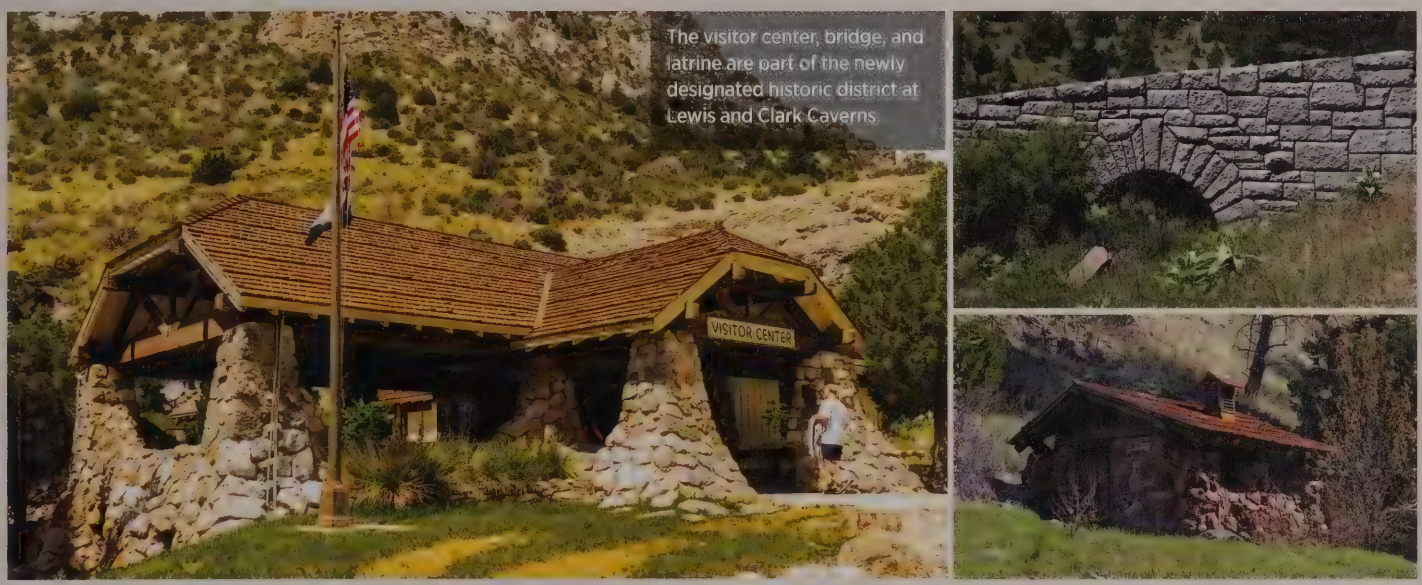
STATE PARKS

Caverns receive historic recognition

Earlier this year, Lewis and Clark Caverns State Park was listed in the National Register of Historic Places. One of Montana's most popular state parks, the site was designated as a "district," meaning that it includes a collection of structures.

The park contains five buildings and eight structures built by the Civilian Conservation Corps between 1935 and 1941, including the visitor center, a beautifully constructed arched granite bridge, stone culverts, the road to the cave entrance, rock-lined hiking trails, and a stone latrine.

Rhea Armstrong, park manager, says her team is proud of the new designation and the historical light it shines on the park. "Ask any of our staff for directions to the old stone outhouse up the hill—the oldest structure in Montana's entire state parks system—and from there you can walk to the granite bridge. These are two features many people miss when they visit the park," Armstrong says. ■



The visitor center, bridge, and latrine are part of the newly designated historic district at Lewis and Clark Caverns.

COMMUNICATION

Best in Show

Montana Outdoors
PRIZE PACKAGE
How to find, hunt, and hang on to your elk this season
Montana Outdoors
DO NONGAME SPECIES MATTER?

For the second consecutive year, *Montana Outdoors* won first place in the magazine category at the Association for Conservation Information's awards competition, topping *Texas Parks & Wildlife* and *Outdoor Indiana*.

This is the sixth time in the past 13 years that Montana has been awarded the top prize in the association's magazine competition.

In addition, *Montana Outdoors* took first place in the wildlife article category for "Green Grazing," about using cattle to improve wildlife habitat; first place in the general interest article category for "What About the Others?" which examined the challenge of funding nongame fish and wildlife management; and second place in the fisheries article category for "From Banning TNT to Scanning DNA," a review of Montana fisheries management over the past century.

"A state conservation magazine is only as good as the agency it represents," says Tom Dickson, editor. "Our continued success reflects the excellence of Montana Fish, Wildlife & Parks and the integrity and professionalism of the men and women across the state whose work we feature in each issue."

Formed in 1938, the ACI is a nonprofit organization of communicators working for state, federal, and private conservation agencies and organizations. The awards were announced on August 2 at the association's annual conference, held this year in Springfield, Missouri. ■

CLOCKWISE FROM TOP LEFT: CARTOON BY MIKE MORAN; DONALD M. JONES; DENIS LEBLANC; MONTANA STATE PARKS; MONTANA STATE PARKS; *MONTANA OUTDOORS*; KEVIN LEAGUE

What Duck Is That?

Waterfowl hunters are legally required to identify the species and even gender of the birds they shoot. For everyone else, it's simply fun to know which duck is which. By Tom Dickson

A dark shape dropped from the gray-metal clouds, circled once over the decoys, then set its wings to land. I stood up in the blind and fired twice, dropping the bird into a shallow pond. After wading out, I lifted up the...well, to be honest, I had no idea *what* it was. The duck was brown gray and had a gray bill. Wigeon? Gadwall? Ringneck?

That was 35 years ago, when I first started duck hunting. Back then I was happy to bag a duck of any species, but I quickly realized that "just any duck" wouldn't do.

For one thing, I needed to identify the birds I was shooting because federal and state regulations impose specific limits—and even periodic bans—on certain species and the gender of some species. For instance, in 2018, the daily limit in Montana allows only two hen mallards, one pintail, and two canvasbacks. A hunter had better know what those birds look like—in the air—before firing and possibly committing a federal crime.

With duck hunting, you don't want to "shoot first and ask questions later."

Another reason I wanted to identify ducks was for ethical reasons. It seemed wrong to kill a bird without even knowing what it was. That seemed disrespectful to the ducks and to the long tradition of waterfowlers learning to identify ducks.

Finally, I just wanted to know what was flying around—during hunting season and the rest of the year. Montana is home to a dozen or so waterfowl species. As someone who loves the outdoors, I was curious about what was sitting on the water or winging its way overhead.

Since that day in the pond blind, I've learned from many experienced birders and waterfowlers which duck is which.

Tom Dickson is editor of Montana Outdoors.

PUDDLE DUCKS

Ducks come in two main categories: puddle ducks and divers. Puddle ducks (or dabblers) use shallow ponds, marshes, and rivers more than larger, deeper lakes and reservoirs. They "dabble" or "tip up," submerging their heads with tails in the air as they feed on vegetation and bugs just below the surface.

From a distance, you can tell puddle ducks by the way they exit and return to the water. With big, broad wings, they rise straight up like a rocket. And those wide wings and slower wingbeats allow them to land on a dime. A puddle duck's legs are positioned in the middle of its torso, allowing it to waddle across land fairly quickly.

All drake (male) puddle ducks have a brightly colored patch of secondary feathers on the inner, trailing edge of the wing, called a speculum.

Common puddle ducks are mallards, teal (cinnamon, blue-winged, and green-winged), northern pintails, gadwalls, northern shovelers, and American wigeons.

DIVERS

The other duck category is the divers, found on big, open water such as Freezeout, Bowdoin, and Flathead Lakes; Canyon Ferry, Fort Peck, Hebgen, and Ennis Reservoirs; and occasionally the Missouri and Yellowstone Rivers.

Divers disappear beneath the surface to feed on wild celery and other underwater vegetation as well as mollusks, crustaceans, insects, and sometimes minnows. Divers have shorter wings and quicker wingbeats and move much faster in the air than puddle ducks. They skid to land and need a running start and furious flapping to get themselves up off the water. That's one reason they stay more in open areas of big water. Their large feet are positioned farther back on the body, enabling strong swimming but making it much harder for them to walk on land.

Divers include scaup (greater and lesser), buffleheads, goldeneyes, canvasbacks, redheads, ringnecks, and mergansers.

As with any other birds, identifying ducks becomes easier with practice. Birders can use this article to identify the most recognizable characteristics of most duck species. Hunters can use it to identify each duck they shoot. Hunters should keep in mind that mallards make up roughly 75 percent of Montana's duck harvest each year. When in doubt about a brown duck in the air, assume it's a hen mallard. You do not want to shoot three of those in a day.

LEFT TO RIGHT: DENVER BRYAN; SHUTTERSTOCK

Puddle Ducks (Drakes)

Note: During the first month or so of the hunting season, young-of-the year drakes of all species sometimes haven't fully developed their classic breeding markings. Examples of these "eclipse" drakes include a young blue-winged teal drake yet to develop his trademark white face crescent or a young mallard showing hardly any green in his head.

Mallard
This large duck has a distinctive iridescent green head, a white neck ring, and a brown breast. Identified in flight by the dark head, neck ring, light belly, and light underwings.

Northern Pintail
This slender, midsize duck has narrow wings, a long neck, and long, dark central tail feathers. The head is chocolate brown, and a white stripe extends up from the light breast to either side of the neck. Identified in flight by the long neck and tail.

American Wigeon ("Baldpate")
This midsize duck has a distinctive white forehead (hence the nickname), a green stripe from the eye to the back of the head, and a russet neck. Identified in flight by its white belly and white forewing.

CLOCKWISE FROM TOP LEFT: BRANDON KIESLING; DANNY J. BROWN; GARY KRAMER

Teal
Three teal species live in Montana. All are small, fast-flying ducks. From left to right: The cinnamon teal is burnt amber colored; the blue-winged teal has a white crescent on either side of its face near the bill; and the green-wing has a dark reddish-brown head with green from the eye to the back of the head. All are identified in flight by small flocks moving low over marshes and rivers, twisting and turning as one unit.

Gadwall ("Gray Duck")
This midsize duck is brown-gray with a white belly and dark gray bill. Look for the distinctive patch of white, black, and russet on the upper wing. Identified in flight by a dark head and chest.

Northern Shoveler ("Spoonbill")
This midsize duck has a green head like a mallard's but a white breast, reddish-brown flanks, and distinctively large, spatulalike bill. Identified in flight by its dark head, light chest, and big bill.

CLOCKWISE FROM TOP LEFT: SHUTTERSTOCK; MICHAEL FURTMAN; GARY KRAMER; KEN ARCHER; SHUTTERSTOCK

Diving Ducks (Drakes)

Goldeneye ("Whistler")
The two goldeneye species—common and Barrow's—are stocky, midsize ducks with bright white bodies; tall, dark, peaked heads; amber eyes; stubby dark gray bills; and white cheek markings. They are often seen on large rivers in late season. Identified in flight by a bright white belly and chest and distinctive whistling sound made by their rapid wingbeats.

Redhead
This midsize duck has a bright, reddish-brown head, blue bill, gray body, and black chest. Difficult to identify in flight. Often confused with the canvasback.

Ringneck ("Ringbill")
This small duck has a dark, peaked head and a white ring around the front of a blue-gray bill. Difficult to identify in flight.

CLOCKWISE FROM TOP LEFT: CHRIS MCGOWAN; SHUTTERSTOCK; SHUTTERSTOCK;

Scaup ("Bluebill")
The two scaup species, lesser and greater, look similar. Both species are midsize ducks with a dark head, chest, and rump, with white flanks and undersides, and yellow eyes. Identified in flight by the white wing stripe on the upper wings, bright white belly, and white underwings.

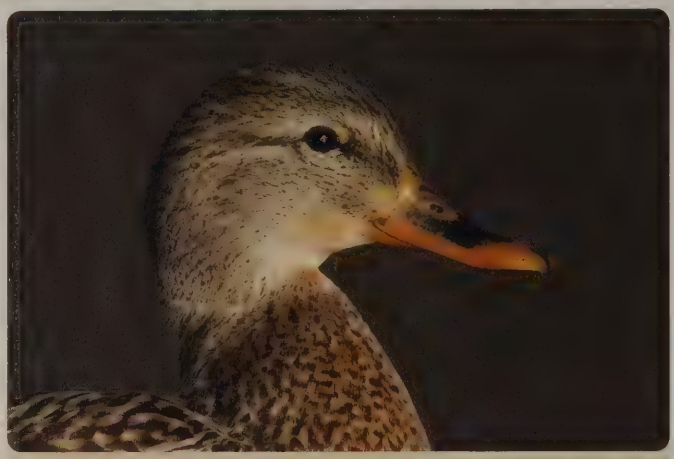
Common Merganser ("Fish Duck")
Of Montana's three mergansers—common, hooded, and red-breasted—the most frequently seen is the common. This large, long, slender duck has a black back and white chest. The dark green head sports a distinctive pointed, bright red bill. Identified in flight by its straight body and neck and narrow beak.

Canvasback ("Can")
This large duck has red eyes and a pale body, black chest, and distinctive flat forehead that slopes to a black bill. Identified in flight by extensive white on its wings, chest, and back and the large, dark reddish-brown head. Often confused with the redhead.

CLOCKWISE FROM TOP LEFT: SHUTTERSTOCK; SHUTTERSTOCK; KEN ARCHER

What hen is that?

Hens can be especially tough to identify. Their head and bill offer helpful clues:



Mallard
Brown head, black eye stripe, and orange bill with dark center.

Pintail
Plain head and dark gray bill.

Gadwall
Brown-gray head with a slender orange bill, dark on top.

Wigeon
Brown head with a small, black-tipped gray bill.

Teal (Cinnamon teal shown)
All have gray bills, the cinnamon's being longer than those of the other teal species and similar in shape to a shoveler's.

Shoveler
Brown head with a large, orange, spatulalike bill.

CLOCKWISE FROM TOP LEFT: SHUTTERSTOCK; SHUTTERSTOCK; SHUTTERSTOCK; MYOLO KANA; CHARLOTTE LILTZ; SHUTTERSTOCK

Canvasback
Brown head with a flat forehead sloping to a long, dark gray beak.

Redhead
Round, brown head and a gray beak with a dark tip.

Scaup (Greater scaup shown)
Brown head with a white patch behind a gray bill.

Ringneck
Brown head with white ring around the front of a blue-gray bill.

Common Goldeneye
Brown head, amber eyes, and a short, dark gray beak.

Common Merganser
Crested, reddish-brown head and a red bill that is slender and pointed.

CLOCKWISE FROM TOP LEFT: SHUTTERSTOCK; SHUTTERSTOCK; SHUTTERSTOCK; SHUTTERSTOCK; DAVE MCGEE; SHUTTERSTOCK

CARRY ALL THAT UP THERE? Hunting and backpacking can be more enjoyable, and you can travel farther each day, if you shed a few pounds from your pack and footwear.

I can help you drop 10 pounds, no dieting required.

by Jack Ballard

Hunting and backpacking are hard enough without carrying around an extra 10-pound dumbbell. Okay, I don't mean an actual dumbbell, but I've found that many fellow hunters and backpackers haul excess or unnecessarily heavy gear when afield. The added burden makes it harder to climb mountains, hike long distances, and haul a big game carcass back to camp or the trailhead. Dropping that surplus weight from what we carry—I estimate most hunters could do away with up to 10 pounds—can make backcountry outings more enjoyable and allow us to spend more time in the mountains or on the prairie.

If you're ready to shed a dumbbell's worth of weight from your load, here's how:

SHARE WITH OTHERS

Hunters and backpackers often travel with others, both for safety and fellowship. One of the easiest ways to drop a few pounds is to avoid carrying duplicate gear. Maybe because of American individualism, many feel they need their own stuff. For some items, this is true: We each require a personal rifle or shotgun, spare ammunition that matches the firearm, water bottle, daypack, and, in case we get separated and lost, a fire-starting kit, headlamp or flashlight, and other basic survival gear.

But a party actually needs only one, or one set, of many items for the entire group. A few seasons ago, one of the two fellows I was hunting with killed a bull elk. As we prepared to quarter the animal for packing, he asked if any of us had game bags. Turns out we *all* had game bags, 16 total. Even if we'd been lucky enough to kill another bull—which didn't happen—we still had twice as many game bags as necessary.

Game bags don't weigh much, but you get the point. Group members can share plenty of heavier items. For instance, a folding or collapsible saw capable of cutting bone and branches has many uses on a big-game hunt. A small party of hunters won't need more than one. My favorite field saw weighs 17 ounces. If a pair of hunters brings only one, they can save more than a pound.

Look closely at what you plan to carry, then talk to others in your group to see who else is bringing along a stove and fuel canister, stout rope, insect repellant, GPS unit, or other items that could be shared to lighten everyone's load.

Writer Jack Ballard of Red Lodge is the author of several hunting books and wildlife guides.

LIGHTEN YOUR GEAR

Midpriced hunting rifles weigh between slightly over five pounds to more than eight pounds. Simply switching to a lighter firearm could take up to three pounds off your shoulder.

Years ago, lighter rifles kicked much harder than heavier ones. That's still true, but not nearly as much, thanks to new recoil pads and stock design. The main problem with lighter guns is that they generally cost more. But you can find some adequate big game rifles weighing less than seven pounds for about $750.

Even without plunking down hundreds of dollars for a new rifle, most hunters can shave a pound or so from their shooting outfit. Switching to a compact scope whittles a few ounces without sacrificing optical performance. A nylon sling is much lighter than a heavily padded leather version, and, in my opinion, nearly as comfortable. Attached bipods weigh up to 1.5 pounds. Do you really need to carry that extra weight, or could you make an equally steady shot by resting your rifle on your daypack?

Another easy way to shed weight is to stop carrying too much ammunition. Many of my hunting companions feel unprepared if they don't have a full box of extra bullets in their pack. A box of 20 cartridges for a big-game rifle weighs at least one pound. Yet a competent shooter with 10 cartridges is well prepared for a hunt. If you're shooting more than that, perhaps you need better judgment or marksmanship.

PARE DOWN THE APPAREL

Don't get so wrapped up in evaluating the weight in your hunting daypack or backpack that you neglect to apply the same consideration to what you're wearing. My closet holds two pairs of pants, both providing enough insulation for hunting in moderately cold temperatures. One pair, adorned with camouflage fabric purported to block human scent, came from a respected hunting apparel manufacturer. The other I plucked from a rack at a local thrift store, formerly the natty wool threads of some gentlemanly type with an inclination for loden green slacks. Not only did I save a bundle on the wool trousers, they're significantly lighter. Compared to the 30.6-ounce "hunting" pants, the woolies weigh a wispy 17.5 ounces. That saves more than three-quarters of a pound from just one garment.

I figure that switching to a lighter jacket and other clothing can trim a total of three or more pounds from a big-game hunter's burden. I consider many of the so-called "hunting" garments to be unnecessarily bulky, especially for active hunting.

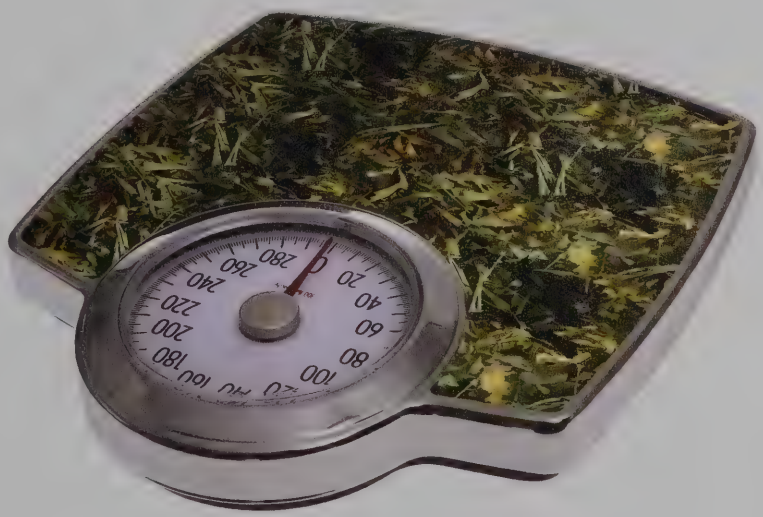
Of course, you don't want to be foolhardy and put yourself at risk of hypothermia. No matter where you hunt in this state, a rainstorm or even blizzard could quickly blow in. This is Montana, after all. Like so many hunters, I carry some essential backup clothing. Most important is a lightweight down sweater I stuff into a pint-sized stuff sack. Mine weighs 13.2 ounces, including the stuff sack. Compare that to a quilted hunting jacket in my closet that weighs 30.7 ounces—more than a pound heavier.

STEP UP TO FLYWEIGHT FOOTWEAR

The most significant place to lighten your load is in your hunting or hiking boots. When extra weight is on your shoulders, you simply carry it. But when unnecessary ounces or even pounds are on your feet, you lift that weight with every step—thousands of times a day. With boots, even a few ounces makes a huge difference in your ability to hike extra miles.

Traditionally, backcountry boots were heavy—with insulation, layers of leather, and thick rubber soles. Unfortunately many still weigh six or more pounds. Yet so many reasonably priced lightweight boots are now on the market that there's no reason a pair is not in your hunting lineup. Even lighter are ankle-high hiking boots. These are great for most conditions and can be paired with waterproof gaiters for hiking through light snow or wet vegetation. Of course, deep snow and below-zero temperatures still call for the taller, insulated boots. But most of the time, I'm not hunting in those conditions. In mild weather I don't miss the bulk or insulation of a traditional hunting boot, and my legs are happier at the end of the day.

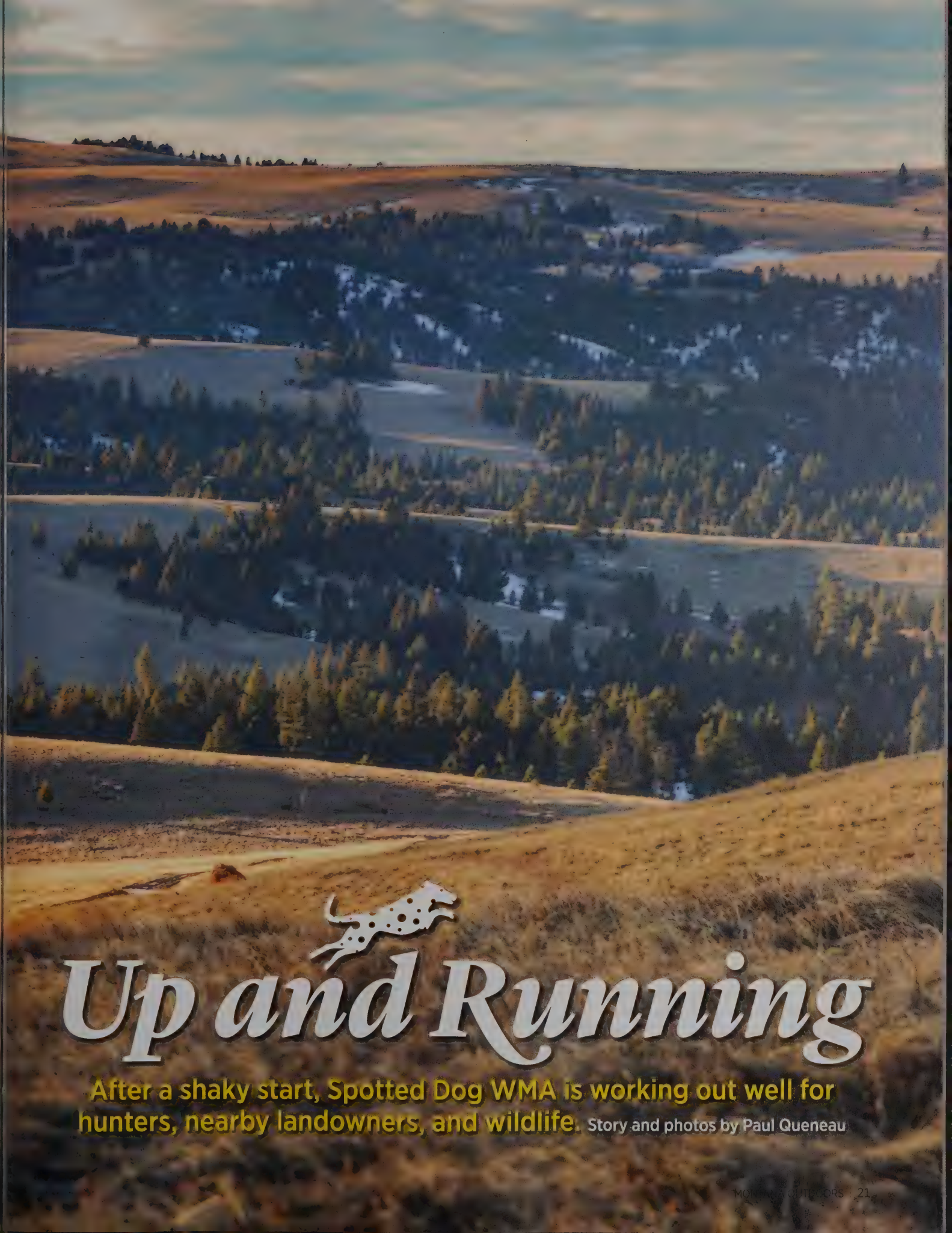
We hunters are getting older each year. And the big game animals we pursue are moving farther than ever into the backcountry, away from roads and trails. If we want to reach those deer, pronghorn, and elk, lightening the load on our back and feet may be the most productive thing we can do this season (though shedding a few pounds from around the waistline wouldn't hurt, either).



Lightening the load on our back and feet may be the **most productive thing** we can do this season (though shedding a few pounds from around the waistline wouldn't hurt, either).

PHOTO ILLUSTRATIONS BY LUKE DURAN/*MONTANA OUTDOORS*

ON THE PROWL The author's sons, Liam and Jackson, head out across 58-square-mile Spotted Dog WMA near Deer Lodge in search of elk



Up and Running

After a shaky start, Spotted Dog WMA is working out well for hunters, nearby landowners, and wildlife. Story and photos by Paul Queneau

Last fall, my sons Jackson and Liam, 12 and 14, spent most of the rifle season hunting white-tailed deer. Yet as Thanksgiving rolled up, our freezer stood empty. Both boys had made wise decisions to pass on iffy shots. Their restraint impressed me; I had less of it at their age. But I also dearly wanted their patience and persistence to pay off.

The 2017 season also offered Jackson his first chance to hunt an elk. Two years earlier, at age 10, he had killed his first whitetail doe, thanks to Montana Fish, Wildlife & Parks' then-new Apprentice Hunter License, limited to deer and smaller game animals. Elk are reserved for hunters 12 and up, and finally Jackson was eligible.

Yet elk had eluded us all season. So on a sunny Friday, the day after Thanksgiving, we set out from Missoula on a last-ditch sortie to try out an elk mecca I'd heard great things about but never hunted: Spotted Dog Wildlife Management Area.

Wedged between Avon, Garrison, and Deer Lodge, this 37,616-acre (58-square-mile) WMA consists of golden grass hills and ridges dotted with occasional stands of bitterbrush, aspen, and conifer as the landscape rises toward the Continental Divide. In addition to elk, it's home to neotropical migrant songbirds, forest grouse, raptors, native trout, mule deer, pronghorn, moose, and even the occasional grizzly bear. It's also less than an hour's drive from Helena, Deer Lodge, and Missoula, making it easily accessible to tens of thousands of hunters, anglers, hikers, and wildlife watchers.

Spotted Dog's main purpose is providing habitat to help migratory big game herds survive nasty winters. But enough elk congregate here each fall that the WMA has filled many a hunter's freezer since it opened to the public eight years ago.

BIRTH OF A WMA

The state purchased the Spotted Dog property in 2010 using Natural Resource Damage Program (NRDP) money earmarked for restoring or replacing lands harmed by heavy metal mine waste in the Clark Fork River basin. This $130 million trust (an amount the fund maintains today) is part of a court settlement with Atlantic Richfield Company for decades of pollution produced by mines and smelters in Butte and Anaconda. The money can be used to purchase wildlife habitat and lands that increase recreational opportunities to help offset losses to natural resources damaged beyond repair. FWP applied for funding to do just that, and received $16.6 million to purchase Spotted Dog and fund its future management.

The Rock Creek Cattle Company (RCCC) had for decades leased 27,161 acres of the property from owner R-Y Timber Company. Bordered on the east by the Helena–Lewis and Clark National Forest, that parcel was also checkerboarded with more than 10,000 acres of Montana Department of Natural Resources and Conservation (DNRC) school trust land (see map on page 25). FWP wildlife managers had long known that the property housed wintering elk and a variety of other wildlife, so when the land came up for sale, the department took notice. The Rocky Mountain Elk Foundation paid for a land appraisal and supported the purchase, as did local conservation groups such as Anaconda Sportsman's Club and Hellgate Hunters and Anglers.

All involved feared that the land might otherwise be sold then subdivided into small lots for new homes—making it far less beneficial to wildlife, especially elk. "Elk spread out over a large area in the summer, but deep

GREAT PLACE FOR FLYING Bald eagles, golden eagles, and other raptors are among the 86 bird species that biologists have documented at Spotted Dog Wildlife Management Area.

Paul Queneau is the conservation editor of Bugle, *the magazine of the Rocky Mountain Elk Foundation. He lives in Missoula.*

WORKING THE WMA Right: In 2011 FWP regional wildlife area manager Dave Dziak (since retired) released insects as one way to control spotted knapweed on Spotted Dog WMA. Roughly 6 percent, or 2,000 acres, of the wildlife area is infested with knapweed and other invasive species. Below: FWP area biologist Julie Golla talks with a rancher about elk near Spotted Dog. Local landowners maintain a keen interest in elk numbers because overabundant herds can cause economic hardship by grazing crops and trampling fences.

snow forces them into a much smaller area where they eke out a living through the winter," says Rick Northrup, chief of FWP's Wildlife Habitat Bureau. "Those bottleneck habitats are really vital to maintaining healthy herds. We wanted to purchase Spotted Dog primarily for its critical value to wintering elk."

Biologists also knew the land was important to other species. Before her retirement this past spring after 30 years as an FWP nongame wildlife biologist, Kristi DuBois oversaw the department's initial assessment of Spotted Dog's smaller wildlife species. "The habitat for game and nongame species is off the charts," DuBois says. "Water is all over the place—springs and riparian habitats interspersed with prairie and patches of aspen and other timber. It's kind of a picture postcard for what wildlife need."

To assess Spotted Dog's diverse plant communities, FWP contracted with ecologists to survey its forests, grasslands, shrublands, and wetlands. The WMA contains the largest contiguous native grassland in western Montana under public ownership, including vast stands of rough fescue, a grass that elk love. Dense stands of timber provide critical thermal cover for elk in winter.

Over several years of surveying, FWP wildlife biologists and technicians, along with crews from the University of Montana's Avian Science Center, recorded 183 wildlife species. Among the 86 bird species were state "species of concern," such as golden eagles, Lewis's woodpeckers, and long-billed curlews. FWP fisheries biologists identified native westslope cutthroat trout in several streams that weave through the property.

The habitat news wasn't all good. Some areas had been damaged from overgrazing by cattle, especially along stream corridors. Roughly 6 percent (2,000 acres) of the WMA was infested with spotted knapweed or other invasive plants. But overall, Spotted Dog remains a wildlife wonderland. "It gives you an appreciation for what this country used to look like," says Mike Thompson, wildlife manager of FWP's west-central region in Missoula.

After approval from the Montana Land Board, FWP purchased the property from R-Y Timber. "Spotted Dog is a great example of what Montanans do," says Chris Marchion, a board member of the Anaconda Sportmen's Club. "The public stands up and says, 'We want wildlife on the landscape, and this is our contribution to accommodate that wildlife.'"

TWO-WAY LEARNING

FWP's purchase of Spotted Dog was not welcomed by all. Ranching has long been the lifeblood of the Deer Lodge area, as commemorated by the Grant-Kohrs Ranch National Historic Site at the edge of town. Despite ownership changes since the 1880s, ranchers have always run sheep or cattle on the property, supporting livelihoods and a proud heritage. Some saw the FWP acquisition as signaling the end of a cherished era. Through an agreement with FWP, RCCC retained cattle grazing rights through 2013. After that, the department wanted to rest the land from grazing to allow overgrazed areas to recover.

It didn't help that local ranchers suspected that the state was eyeing Spotted Dog for a bison introduction, and relationships grew more strained when their fears were confirmed. Few wildlife species concern Montana ranchers as much as bison, and after a flood of negative public comments, the idea was taken off the table in 2011. Understandably, tensions remained.

To resolve these conflicts, in 2013 FWP began meeting with 18 area residents who had applied to serve on the Spotted Dog WMA Working Group. The group, which has met 30 times over the past five years, included neighboring ranchers, hunters, anglers, other recreational users, educators, community leaders, and DNRC staff. At its first meeting, members selected Gold Creek rancher John Hollenback as chair and Anaconda businessman and past FWP director Jim Flynn as vice chair.

"The process has been one of learning a lot, on both sides," Thompson says. "And I cannot emphasize 'both sides' enough. It helped FWP understand what the community values most about this landscape, and

WINTER AND SPRING ON THE WMA A herd of elk rests at Spotted Dog near the iconic summit of Rocky Ridge, visible in the background. The wildlife area contains prime winter elk range. Above: A mountain bluebird arrives at the WMA in early spring.

how to incorporate that as much as possible into our fish and wildlife management—and in the process, develop a level of trust with each other."

The most immediate need, according to the working group, is to lower the number of overabundant elk, which can eat ranchers' hay and knock down fences (see "Lowering elk numbers," below).

Though some streams and wetlands on the WMA are still recovering from cattle overuse, selected stands of grasses in the uplands may attract more elk if they are grazed by cattle periodically.

Elk resist eating old, tall grasses. Cows are less picky, and can be used to "mow" down old stands and rejuventate new growth. But the grazing needs to be managed. "If you just graze an area constantly, the vegetation never has time to recover," explains Julie Golla, FWP area biologist for the upper Clark Fork. "But if you do it in intervals, the grass and forbs are more attractive to elk in the spring when they green up. Grazing off all the dead stuff allows it to grow back anew."

The WMA grazing is a good deal for both ranchers and wildlife. "No money changes hands," says Golla. "If you're grazing on Spotted Dog, you're resting grass on your own property. And that benefits elk and cattle in both places."

FWP issued a final management plan for Spotted Dog in early 2018. The document, a collaboration between the department and the working group, calls for improving public access, thinning conifers to help increase aspen stands (a food preferred by deer, elk, songbirds, and woodpeckers), restoring stream sections to increase prime trout habitat, and enhancing streamside wildlife corridors. The plan also calls for continuing to control spotted knapweed and other noxious vegetation to protect grasslands and neighboring properties. Another focus of the plan is mule deer, a popular species whose population has declined in western Montana. FWP is looking to increase antelope bitterbrush, one of the species' favorite foods, and find other ways to increase the WMA's mule deer and pronghorn populations.

"The plan is definitely ambitious," Golla says. "It aims to preserve a wide array of wildlife habitat, provide awesome recreation potential for a place that wasn't accessible to the public before, and be a good neighbor—all the while not causing any headaches for anybody."

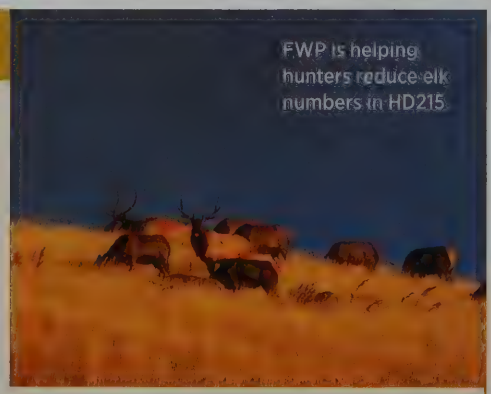
Key to the plan's success, Thompson says, is FWP's decentralized operational structure. The WMA's maintenance supervisor lives close by in Warm Springs. The

Lowering elk numbers

FWP bought Spotted Dog primarily to help elk. Yet the larger Hunting District 215 currently contains twice as many elk (roughly 2,650 animals) as the population objective, which FWP established based on comments by hunters and landowners.

So while the long-term plan for Spotted Dog is to help sustain a healthy elk herd that migrates to and from nearby Helena–Lewis and Clark and Beaverhead-Deerlodge National Forests, the more immediate concern in HD215 is to significantly reduce elk numbers. The elk graze on pasture meant for cattle, trample fences, and eat crops.

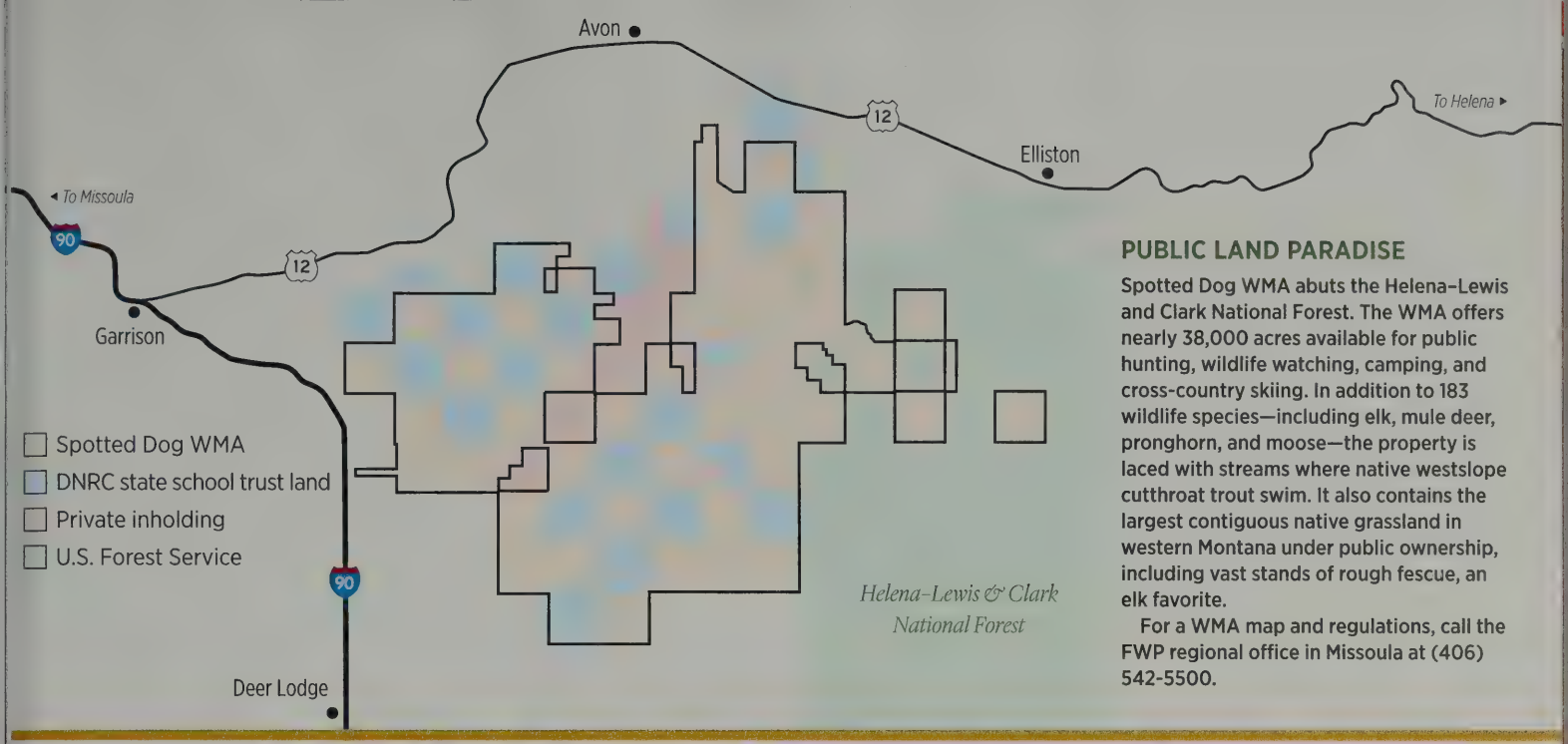
"The biggest barrier to the wildlife management area fitting into the community has been the overpopulation of elk, because that creates an economic burden for landowners," says Mike Thompson, FWP regional wildlife manager in Missoula.



FWP is helping hunters reduce elk numbers in HD215

FWP is attempting to tackle the problem in 2018 by offering either-sex (except spikes) A tags for elk throughout the hunting district and over-the-counter B licenses (cow and calf elk) for use only on private lands, with some exceptions. The B tags, which must be purchased before the general season, give hunters with access to private land the potential to bring home two elk.

Julie Golla, area wildlife biologist, says the B tags will also let ranchers with concerns about overpopulation play a key part in trimming the elk herd while moving elk off private lands. "One goal here is to keep the elk moving so that hunters have a crack at them," she says. "That's really the only way we can bring numbers down to a reasonable level." ■



PUBLIC LAND PARADISE

Spotted Dog WMA abuts the Helena–Lewis and Clark National Forest. The WMA offers nearly 38,000 acres available for public hunting, wildlife watching, camping, and cross-country skiing. In addition to 183 wildlife species—including elk, mule deer, pronghorn, and moose—the property is laced with streams where native westslope cutthroat trout swim. It also contains the largest contiguous native grassland in western Montana under public ownership, including vast stands of rough fescue, an elk favorite.

For a WMA map and regulations, call the FWP regional office in Missoula at (406) 542-5500.

local game warden lives almost within walking distance in Deer Lodge. And the area fisheries and wildlife biologists are based in Anaconda. "Program direction comes from our offices in Helena and Missoula," Thompson says. "But the day-to-day decisions on Spotted Dog are made by FWP staff who are part of the local community. That makes a big difference in helping us build the trust-based relationships that are essential for managing such a large area that affects so many people."

Julie Golla, FWP area wildlife biologist

BACK ON THE HUNT

As I drove toward Spotted Dog last fall with sons Jackson and Liam, I was looking forward to experiencing the WMA's "awesome recreation potential," as Golla had put it. We headed from Avon up Spotted Dog Creek and began glassing forest openings. Then we hiked along some fingers of high-altitude spruce, hoping to surprise an elk herd.

We cut plenty of tracks in the aging snow among the trees but didn't bump any elk. Nor did we glass any on dozens of forest openings and vast grassy savannahs within the massive wildlife area. As we made our way back to the vehicle, the sun dropping below the horizon, I suggested we slowly start driving home, stopping to glass from overlooks to see if we might catch some elk slinking out of the trees for their evening meal. After just a few minutes of driving, there came word from the back seat.

"Dad, I might see an elk," Jackson said.

Sure enough, a cow had just popped up in a meadow about 300 yards away. I stopped the vehicle. With only 15 minutes of legal shooting time left, I knew our chances were slim. But if we walked directly toward the elk, maybe it wouldn't perceive us as moving.

As we began our stalk, the cow turned toward us and began to amble closer. At 200 yards, I set up shooting sticks and Jackson knelt to perch his rifle. I glanced at my watch—only seven minutes left of legal shooting time. Then the cow, standing atop a rise, turned broadside and began to feed.

"If you've got a clear shot and can hold your crosshair steady on its vitals, flip off the safety and just gently squeeze the trigger," I said. Jackson looked up at me and shook his head.

"It's just sky behind her, Dad."

I took a moment to respond, knowing that if faced with that shot I'd have a hard time not taking it. But I also knew I needed to respect and adhere to the rules that Hunter Education had drilled into my boys: "Always be sure of your target and beyond."

We repositioned a bit in those last few minutes, but the cow never presented a safe or ethical shot. Finally, looking at my watch, I told the boys we'd have to call it a day. Jackson took the news without anger or sorrow, making me a proud dad.

As we headed home, we talked about our day at Spotted Dog and all we'd seen and discovered.

Count on us being there well before sunup this October 20.

PINT-SIZE PREDATOR
Standing just 12 inches at the shoulder and weighing only 5 pounds, the swift fox is the smallest canid in North America.

SEARCHING FOR SWIFT FOXES

FWP biologists in eastern Montana look for a small carnivore making a big comeback in much of its historic range. BY MARLA PRELL

On a chilly January night, Brandi Skone parks her truck on a moonlit, snow-crusted prairie in east-central Montana, miles from nowhere. The Montana Fish, Wildlife & Parks wildlife biologist climbs down from the pickup and begins adjusting dials on her telemetry receiver, straining to listen to the device.

"That's a beep," she says suddenly. "Did you hear it?"

The "beep" indicates that one of two radio-collared male swift foxes she has been seeking is nearby. Biologists haven't detected the fox in nearly three weeks.

Skone and volunteer John Kuntz hike through crusted snow to a knoll a few hundred yards away. On the way, they adjust antennae attached to their receivers to pick up a stronger signal. Like the other fox they were tracking earlier in the day, this one never appears. But Skone is happy nonetheless. "We now have an idea of where both are hanging out and what type of habitat they are using," she says.

This is just one of many trips—by vehicle and airplane—that Skone, her colleagues, and volunteers will make over the next year to learn about this elusive predator. Their work is part of an FWP pilot project in southeastern Montana to study the canid's habitat, dispersal, and den locations. If the study succeeds, FWP may broaden it to cover more of eastern Montana. "But for now, swift fox densities in this part of the state are so low that we needed to see if we could even capture any to study," Skone says.

GONE THEN BACK

The swift fox is named for its lightning speed—nearly 40 miles an hour in a sprint. It's the smallest canid in North America, about the size of a house cat. It weighs just 5 pounds, about half the weight of a red fox, and stands only 12 inches at the shoulder.

Swift foxes were once abundant on the Great Plains, racing across short- and mixed-grass prairie in pursuit of prairie dogs and ground squirrels, their primary prey. But starting in the late 1800s, trappers began overharvesting the curious, easily captured animals. In the early 20th century, the federal government began widescale extermination campaigns that poisoned wolves and rodents. Swift foxes were inadvertently poisoned when they ate toxic bait. As wolves disappeared, coyote and red fox numbers grew, outcompeting the smaller swift foxes. Adding to the loss was the conversion of prairie habitat as grasslands were converted to cropland.

By 1969, Montana declared swift foxes extirpated (locally extinct). Canada made the same declaration 11 years later, and in 1996 the U.S. Fish & Wildlife Service announced that the swift fox was a candidate for federal protection under the Endangered Species Act.

Then swift foxes began showing up out of nowhere in northern Montana.

Or, more precisely, out of Canada.

Between 1983 and 1997, Alberta and Saskatchewan had released 942 captive-bred swift foxes, and some of the animals crossed the border. As early as 1996, a Montana State University graduate student documented a resident population of swift foxes in north-central Montana. That helped convince the federal government, in 2001, not to list the species. "The re-establishment of swift foxes in southern Canada and Montana is a huge success story recognized by conservationists across the continent," says FWP wildlife biologist Heather Harris, based in Glasgow.

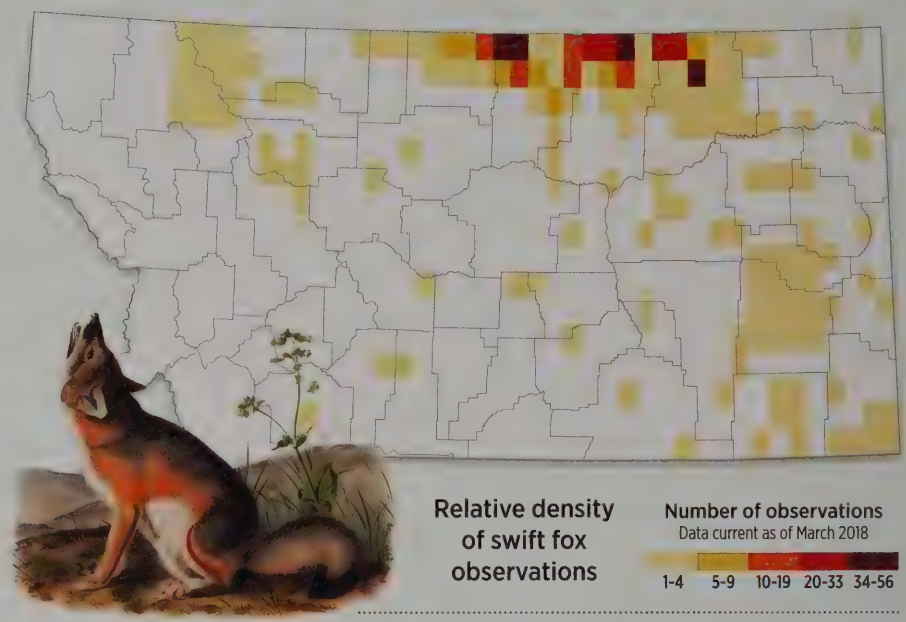
The last biological census, in 2014-15, estimated that at least 1,000 swift foxes lived in north-central and northeastern Montana, some in places they haven't inhabited for more than a century. In addition to those dispersing from Canada, some foxes may have spread east from the Blackfeet Indian Reservation, where the tribe released 123 of the small carnivores during the late 1990s through early 2000s. Other reasons for the increase may be the end of large-scale predator and rodent extermination, as well as an increase in abandoned farmsteads where the land has reverted to semi-native habitat.

Though swift fox numbers appear lower in southeastern Montana, the re-established, stable population in north-central Montana has allowed for a limited trapping season in some areas. "We get essential biological information from trappers by analyzing the jaws and pelts of foxes they capture," Harris says.

Marla Prell manages the FWP regional Information and Education Program in Miles City.

WHERE ARE SWIFT FOXES?

After releases of captive-bred swift foxes in southern Canada from 1983 to 1997, the predators spread south into Montana, where they had previously been declared locally extinct. As biologists broaden their search and people increasingly report sightings, swift foxes are showing up where they haven't been recorded in nearly a century.



DATA SOURCE: MONTANA NATURAL HERITAGE PROGRAM · FWP · SWIFT FOX PAINTING BY JOHN JAMES AUDUBON

ON THE MOVE One question researchers hope to answer is whether barriers such as large rivers and rugged terrain prevent swift foxes from dispersing more widely. "For instance, does Fort Peck Reservoir now block historical swift fox movement between Canada and southern Montana?" asks FWP wildlife biologist Heather Harris.

CLOCKWISE FROM TOP: CRAIG MILLER; DAVID R. ARMER; DAWN Y. WILSON; DAVID R. ARMER

BARRIERS BLOCKING DISPERSAL?

The more that scientists learn about swift foxes, the better that agencies like FWP can help conserve the species and keep it from becoming listed as threatened or endangered. "One thing we're looking at is survival: when and where they die, and what they die from," says Ryan DeVore, an FWP wildlife biologist based in Broadus. DeVore says he and other biologists suspect that most are killed by coyotes, but deaths could result from unknown factors.

Skone, based in Miles City, is especially curious about where the relatively few swift foxes in southeastern Montana come from. "Did they move down from northern Montana or from core populations in South Dakota and Wyoming, or are they leftovers from a remnant population that's been here all along?" she asks. She and other FWP biologists take tissue samples from all swift foxes they livetrap or find killed along roadsides and compare the DNA to that of specimens from other areas. "If, for instance, they are from South Dakota, then we'd know that studies in that state would tell us more about our foxes than, say, studies in

IS THAT A SWIFT FOX?

Swift foxes are distinctive looking canids that live in the central and eastern Montana plains. Weighing only 5 pounds, they are half the size of a red fox and substantially smaller than a coyote.

After its tiny stature, the next thing you notice about a swift fox is its luminous yellow, almond-shaped eyes, often set off by a dark, teardroplike pattern descending to the muzzle. The tip of the swift fox's bushy tail is black, and its coat is dark buff gray on top and orange tan on the sides and legs. Coyotes have similar coloring but are much larger, weighing 22 to 28 pounds. Red foxes, which weigh about 11 pounds, are red orange with white-tipped tails. ■

FWP needs help monitoring swift foxes. Report any sightings to Heather Harris, (406) 228-3725, heharris@mt.gov, or Brandi Skone, (406) 234-0928, BSKone@mt.gov.

WORKING THE TRAPS Clockwise from above left: A swift fox sits in a live trap in Garfield County; FWP wildlife biologist Brandi Skone holds one of six foxes her team captured last November in Powder River County; checking a fox's age by tooth wear and coloration; attaching an ear tag to a juvenile swift fox (biologists also weigh the animals, check gender, take a tissue sample, and—on some—attach a radio or GPS collar); after being collared, a swift fox dashes off then stops just far enough away to inspect the biologists.

somewhere like Alberta," Skone says.

The southeastern Montana biologists also want to learn what type of habitat swift foxes use in their region. "North of Fort Peck [Reservoir], you have that ideal habitat of open, flat prairie," says Skone. "But here we have much less of that. It's hilly, mixed with sagebrush grassland, badlands, and breaks. Are the foxes using those areas too?"

In another swift fox study, done in cooperation with graduate student Andrew Butler of Clemson University, Harris and her colleagues in northeastern Montana are trying to see if swift foxes are occupying new territories, and if barriers such as Fort Peck Reservoir, the Milk River, or rough topography thwart the animals' movements. "We'd like to know why swift foxes aren't spreading out more from north-central Montana," Harris says. "Is it an issue of barriers we aren't aware of, or other reasons? And does our population connect with the foxes in southeastern Montana?" Harris says Butler and FWP workers have fitted 48 swift foxes with GPS collars over the past two years to monitor movement and mortality.

PUBLIC INVOLVEMENT

To study the elusive, nocturnal predators, biologists bait live-traps with meat to capture specimens they can examine and track. Some captured foxes are fitted with

TOP PHOTO: DAVID R. ARMER. INSET PHOTOS CLOCKWISE FROM ABOVE LEFT: BRANDI SKONE; MONTANA FWP; BRANDI SKONE; MARLA PRELL; JESSE KOLAR

BETTER THAN EXPECTED Swift fox family members greet the sunrise and each other at a den site. In southeastern Montana, researchers have recently captured 12 swift foxes and located six dens in a region where almost none had been reported in decades. "We weren't sure if we'd be able to capture even one," says FWP wildlife biologist Brandi Skone, who leads a pilot swift fox study in the region.

radio or GPS collars and others with ear tags for identification from a distance.

The southeastern Montana swift fox study focuses mainly on juveniles, which stick around their mother for a few months then range widely to find a mate and establish their own territories. Breeding season runs from late December to early March, and a single litter of three to six pups is born from late March to early May. Pups emerge from underground dens after about a month and disperse in late summer to early fall. Using game cameras and tracking devices, biologists hope to observe as much of this cycle as possible.

Another source of information is people who report seeing swift foxes. The biologists focus their trapping efforts on areas with multiple public sightings. "We encourage hunters, landowners, and others to report observations of live or dead swift foxes," DeVore says. To ensure that people report swift foxes and not red foxes or young coyotes, FWP has publicized information on distinguishing among the related canids (see "Is that a swift fox?" on page 29). DeVore says some swift foxes are killed each year by people mistaking them for young coyotes, which are legal to shoot anytime.

He and Skone think that if southeastern Montanas learn more about swift foxes, they'll be more inclined to help conserve them. "Swift foxes play their part in rodent and insect control and contribute to the natural cycle of prairies," Skone says. "They are amazing creatures."

To broaden knowledge of swift foxes and recruit volunteers, Skone and her colleagues recently applied for a National Geographic grant to start a two-year project with local high schools. The idea is for students to use trail cameras, collect habitat information, monitor fox movements, and survey landowners on public attitudes toward the species. "We have limited resources for our research, and the kids could be a big help," Skone says.

FIFTEEN MINUTES WITH A FOX

On a windy November morning in Garfield County, Harris, Skone, and FWP wildlife biologist Jesse Kolar approach a trap where a captured swift fox announces its displeasure. The animal spins, crouches, and occasionally growls and snaps, its yellow eyes never leaving the trio. They spread a blue bag around the cage opening and coax the animal inside. After weighing the fox in the bag, Harris positions the fabric so she can hold the animal's jaw and sit on the cage with the small bundle across her lap. "Foxes are calmer when gently restrained with their eyes covered," she says.

Skone checks the animal's gender, examines tooth condition for age, looks for fleas and ticks, and assesses its health and condition. She attaches a small red ear tag then takes a tissue sample for DNA testing. Finally, she fastens a radio tracking collar around the fox's neck while Harris records the device's identification number and frequency. Harris also notes the surrounding habitat: rolling hills of prairie, a few dirt roads, and miles of fence. The whole process takes about 15 minutes, slowed only by the numbing cold on bare fingers.

Once done, Harris places the bag on the ground and opens it. The swift fox lives up to its name by racing off in a flash. At about 75 yards away, it turns and drops to the dirt, scraping the offending collar along the ground before trotting away. "They always do that," Harris laughs, "letting you know they're not happy."

The fox isn't pleased, but the biologists are. Skone says she wondered at the start of the study if enough foxes existed in the vast sagebrush prairie badlands of southeastern Montana for her crew to catch even one. So far they have captured 12 and identified six dens. "It's really exciting that more are showing up here, and that we've had good success trapping," she says. "Every little bit of data we collect helps us understand this intriguing species and how we can effectively conserve populations."

HEALTHY BUCK? Now that CWD has been detected in parts of Montana, FWP is working with hunters and others to reduce its spread and keep prevalence low.

Containing the Spread

How FWP is working to keep chronic wasting disease—now confirmed in two areas of Montana—from moving elsewhere in the state. By Peggy O'Neill

This past July, 25 wildlife professionals from seven states gathered in a conference room near the Denver airport. The mood was somber.

"We are a reluctant new member of this group," John Vore, Game Management Bureau chief for Montana Fish, Wildlife & Parks, told his colleagues.

The statement elicited a few chuckles, but the reason for the group's gathering was no laughing matter. Just a few months earlier, Montana had become the most recent state to detect chronic wasting disease (CWD), which is now present in 25 states and two Canadian provinces.

CWD is a contagious neurological disease that infects members of the cervid family (deer, elk and moose). Symptoms at its end stages include poor body condition, excessive salivation and drooling, drooping head and ears, disoriented behavior, and decreased sociability.

There is no known cure for CWD, and it is always fatal to infected animals (though there have been no known cases of the disease affecting humans who eat meat from infected animals).

Presence of the disease was first confirmed in Montana last fall when a mule deer shot south of Billings near Bridger tested positive, as did another mule deer shot less than 10 miles from the Canada border north of Chester in Liberty County.

Though dispiriting to Montana hunters and wildlife managers, the discovery of CWD here was no surprise. Emily Almberg, FWP wildlife disease ecologist, says biologists assumed CWD was already in the state and it was just a matter of time before it was detected. Montana is nearly surrounded by states and provinces where the disease has been detected in wild herds: Wyoming, the Dakotas, Saskatchewan, and Alberta.

Given enough time to work its ravages, CWD can seriously reduce populations. Both Colorado and Wyoming have had the disease for decades. Wyoming has estimated a 21 percent annual decline in one heavily infected mule deer herd, and Colorado reports a 45 percent decline in an infected mule deer herd there. Among white-tailed deer, Wyoming saw a 10 percent annual decline in an infected herd and a corresponding decline in older bucks.

Almberg says that once CWD gets into wild deer or elk populations, there's no way to effectively eradicate it. The only option is to try to keep prevalence low and reduce its spread.

The Wyoming Game and Fish Department organized the regional CWD meeting in Denver and invited game and fish agencies from across the northern Great Plains. Representatives from Montana, Colorado, South Dakota, Utah, Kansas, and Nebraska participated. Among other issues, participants discussed CWD management recommendations developed by the Western Association of Fish and Wildlife Agencies (WAFWA). "The WAFWA recommendations have had a big influence on the states' and provinces' renewed commitment to managing CWD and is defining what man-

Peggy O'Neill is chief of the FWP Information and Education Bureau.

LEFT TO RIGHT: LISA DENSMORE BALLARD; MONTANA FWP; JACK BALLARD

agement will look like," says Almberg. "This regional coordination is one of the most promising developments in recent years. We're hoping it will help all of us develop more effective CWD management tools."

Plans to manage the disease vary among states and often evolve within states. For years, Wyoming chose not to manage CWD because the need did not appear critical. But after seeing CWD prevalence increase and deer numbers in heavily infected herds decline, Wyoming recently decided to actively manage the disease.

CWD was first detected in 1967 in captive deer at a wildlife facility in Colorado and quickly spread to wild herds there. According to Mike Miller, a wildlife veterinarian with Colorado Parks and Wildlife, almost half of that state's deer herds and one-third of its elk herds are now infected. "This is the biggest thing that's ever hit wildlife management in Colorado," he says. Colorado is managing CWD using special hunts and mandatory sampling in specific areas.

With CWD lingering at Montana's door for so long, FWP had the opportunity to learn from other states and was prepared to act quickly when the disease was detected. "Because we had developed a well-thought-out management plan, we've been able to efficiently look for CWD and respond to it when it was found," Vore says.

"Having CWD is now a new normal for Montana."

FWP had identified priority surveillance areas—located near borders of states and provinces with CWD—where biologists monitored for the disease in harvested and road-killed deer and those showing symptoms. That's how the first infected hunter-harvested deer were discovered last year. Then, in accordance with the state's plan, FWP quickly established two special hunts last winter where the infected deer were found. By studying the harvested deer, FWP scientists learned how prevalent and geographically widespread CWD was in the affected areas.

Scientists found that 2 percent of mule deer and 1 percent of whitetails in the Bridger area had the disease, and less than 1 percent of the mule deer in the Chester area were infected.

The state's CWD plan calls for intensely monitoring other priority surveillance areas. "Unfortunately, we don't have the resources to monitor them all at once," says Vore. Instead, FWP will monitor some areas one year then move to other areas the next, rotating over a three-year period. The plan also calls for continuing to collect samples from any animals killed that show CWD symptoms anywhere in the state.

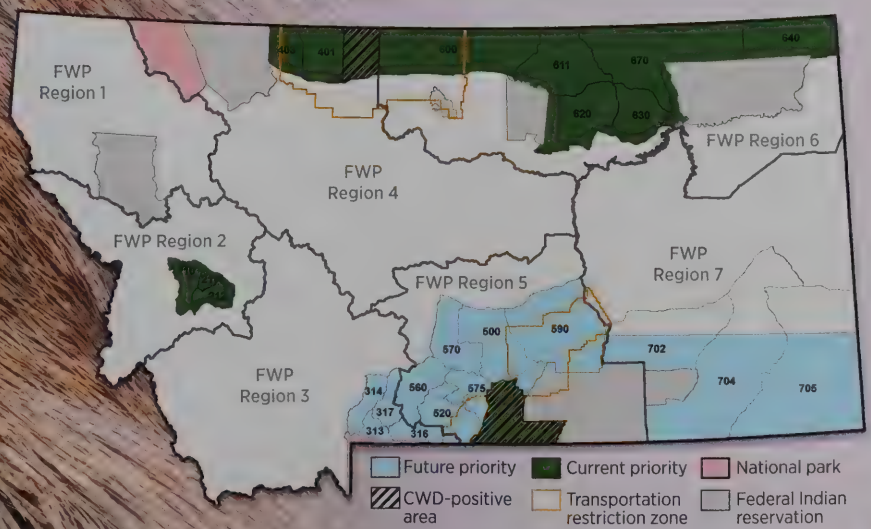
In addition, FWP has established "transport restrictions zones" (TRZs) around areas where the disease was detected. No one may transport the heads or spinal columns of deer, elk, or moose killed in CWD-positive areas out of the TRZs.

Vore says FWP is committed to managing CWD in ways that keep prevalence low and minimize the disease's spread. That will probably mean increasing harvest, especially of males, in CWD-positive areas. Bucks are typically two to three times more likely to be infected than does and disproportionately contribute to the spread of the disease.

FWP may also reduce large deer or elk groupings by removing or fencing-off attractants such as hay stacks or through hazing or dispersal hunts. The disease spreads more readily when deer and elk congregate.

"Having CWD is now a new normal for Montana," Vore says. "But with wise and careful management, we, our kids, and our grandkids will be enjoying deer, elk and moose far into the future."

CWD surveillance priority sampling areas by hunting district.



ZONES AND AREAS FWP established transportation restriction zones (TRZs) where it is illegal to transport deer and other potentially infected big game animals taken in CWD-positive areas. The department is rotating, over a three-year period, priority surveillance areas where scientists are monitoring for the disease.

For the latest on chronic wasting disease management, reports, and special hunts, visit the FWP CWD page:

fwp.mt.gov/cwd

BUSTED A mature rooster flushes from ideal winter cover—a cattail stand surrounded by thick trees and shrubs. Pheasants also need nearby grasslands for nesting in spring. The alarming loss of federal Conservation Reserve Program acreage in recent years has caused bird numbers across eastern Montana to markedly decline.

PHOTO BY GARY KRAMER

Life after CRP

FWP now offers several new habitat lease options to help cure eastern Montana's upland bird-hunting blues.

By Dave Books

During its first two decades, the Conservation Reserve Program (CRP) created spectacular opportunities for upland bird hunting in eastern Montana. Here's an entry from my hunting journal, October 16, 1993: *Joe E. and I hunted a CRP field near Westby, out near the North Dakota line. My Brittany, Groucho, and Joe's Brittany, Rana, performed their usual magic...we limited on pheasants by 9 a.m.*

My journal entries from those glory years are sprinkled with references to my favorite CRP coverts: Westby, Ona's, Boxcar, Silo, Homestead, and many others. Often we'd have our rooster limit by noon and then had to figure out how to spend the rest of the day, either hunting ducks or chasing Hungarian partridge and sharp-tailed grouse.

Most of those fields of waist-high grass in northern Montana have disappeared, converted back to agricultural use. Gone with them are the record pheasant numbers and easy three-bird limits. Gone also are many of the sharp-tailed grouse, songbirds, waterfowl, deer, and other wildlife that lived or nested in those vast grassland seas.

Signed into law by President Ronald Reagan in late 1985, the Conservation Reserve Program is a federal initiative that pays farmers to idle marginal cropland and control erosion by restoring grassland. It's been a boon to wildlife, not to mention upland bird hunting. By 1990, more than 30 million acres of CRP had been enrolled nationwide, much of it in the northern Great Plains. In 2007, the year that enrollment peaked nationwide at 36.8 million acres, Montana had nearly 3.5 million acres of CRP, almost 10 percent of the nation's total.

Three decades after its creation, CRP still exists. But enrolled acres nationwide are down by half from a decade ago. Also, Congress has shifted funding away from the northern Great Plains to the lower Midwest, South, and Eastern Seaboard states. As a result, Montana's CRP enrollment has dwindled to about 1.3 million acres—still a lot of land, but down 2.2 million acres from the peak, a decline of more than 60 percent. And acreage will continue to decline as existing CRP contracts expire.

There's no way to sugarcoat that vast loss of habitat. Montana's pheasant harvest has declined by about one-third from the peak CRP years. Pheasant hunter numbers are down 25 percent from what they were during that time.

It's likely many of us will never again see grasslands like those of the early 2000s in our lifetimes. But that doesn't mean it's time to retire the shotgun. Montana Fish, Wildlife & Parks and other agencies and organizations saw this decline coming and have developed a plan for retaining vital upland habitat and making it available to hunters. Think of it as "Upland Birds Post-CRP."

There's no way to sugarcoat that vast loss of habitat. It's likely many of us will never again see grasslands like that in our lifetimes. But that doesn't mean it's time to retire the shotgun.

While it won't make up for losing 2 million acres of grassland, it definitely offers hope for those of us who love to wander across central and eastern Montana behind a hunting dog. Rick Northrup, chief of FWP's Wildlife Habitat Bureau, recently explained to me how this new approach works.

QUALITY VERSUS QUANTITY

A decade ago, as CRP acreage began to decline, Northrup and his fellow biologists knew they had to begin thinking about protecting upland habitat in new ways. "CRP had made our lives pretty easy," he says. "All that grass was the gift that kept on giving, year after year."

"Upland habitat" consists mostly of dry grasses and shrubs slightly higher in elevation than rivers and marshes.

While CRP is great for upland wildlife—mainly prairie birds but also mule and white-tailed deer and other open-space mammals—it has some drawbacks. For hunters, one is that the federal program does not require public access. Though many landowners allow hunters onto their CRP grasslands—and many CRP fields are part of FWP's Block Management Program—it's common to see roosters flying only into CRP fields marked with "No Hunting" signs.

Another drawback is that CRP grasslands often become too dense for ground-nesting birds to use or hunters to wade through. Without periodic grazing or other treatments to clear out old, thick vegetation, CRP acres can become impenetrable.

The loss of CRP results in an opportunity to create upland habitat lease options that help landowners, target higher quality habitat, and include hunter access. "The idea is to pay landowners who have marginal crop or riparian areas that could be great for wildlife to idle those tracts and provide public hunting access," Northrup says. "It's a good deal for the ag producer because those are not highly productive farmlands. It's a good deal for the upland hunter and wildlife because it's prime habitat."

Think quality versus quantity.

Taking this approach, FWP has created several new upland habitat conservation options using existing programs and grants. Cooperators include landowners, state and federal agencies, and conservation groups like Pheasants Forever, Ducks Unlimited, and the National Wild Turkey Federation.

Details of the various options can become complicated. Many of us long for the days when we could simply "hunt the CRP." But those times are gone. Hunters who want to take advantage of these new options now need to understand new names and concepts:

Habitat Management Leases: These are small tracts (typically up to 160 acres) of high-quality upland habitat not planted with crops and open to public game bird hunting. They may include a variety of out-of-the-way spots that landowners aren't farming or no longer wish to farm, such as low-productivity cropland, wetlands, creek bottoms, and shelterbelts around abandoned homesteads. Lessees

DAVID DALY

Dave Books, Helena, was editor of Montana Outdoors *from 1979 to 2001 and is the author of* Wingbeats and Heartbeats: Essays on Game Birds, Gun Dogs, and Days Afield.

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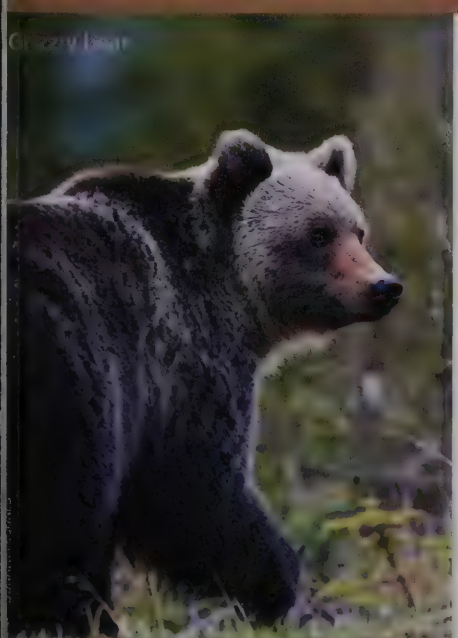

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NOT MUCH NESTING
Punctuated by grain bins, an island of trees is all that remains after a vast CRP field near Lewistown was plowed and converted to wheat. New FWP habitat lease options aim to replace some CRP losses with higher-quality habitat and better public access.

receive payments based on cover types enrolled in three- to ten-year leases.

Conservation Leases: These larger tracts (typically 320 acres or more) of grazing land allow some public access for game bird hunting and bird watching. They can be former CRP lands or existing grasslands that support a variety of birds, including waterfowl and upland game. For a one-time payment (based on acreage), landowners can continue to graze but agree not to remove existing native grasslands or sagebrush or drain wetlands for 30 years.

Open Fields: These are existing CRP lands (up to 320 acres) where FWP makes additional payments to landowners who agree to retain the land in CRP, work with the department to manage it for game birds, and provide public walk-in game bird hunting. The program uses matching federal revenue and Montana upland game bird hunting license dollars to fund a per-acre payment on top of the landowner's existing CRP rental payment. Vegetation may be manipulated by haying, grazing, or other means once every five years—which is both good for the landowner and also improves the health of the grasslands.

Depending on the lease type, Northrup says, FWP may provide technical assistance on rotational grazing or share costs for improvements, such as installing or fixing fences or controlling weeds. "The bottom line is that we have upland game bird license dollars to fund different ways of benefitting landowners, hunters, and wildlife," he says. "We very much want to hear from landowners who might want to participate in these new habitat options."

A CREEK RUNS THROUGH IT

At Northrup's suggestion, I got in touch with Melissa Foster, a wildlife biologist in FWP's Miles City office. Foster put together a habitat management lease in Dawson County that Northrup hopes will be a model for other leases. The lease involves 86 acres of quality grassland habitat adjoining more than a mile of creek bottom.

"Nesting cover is the limiting factor for upland birds in this area," Foster says. "Food is abundant thanks to nearby agricultural fields, and the winter cover around here is adequate. This tract was in CRP at one time and still has a robust mixture of various wheatgrasses and native forbs. It's an isolated piece for the landowner, so he decided he'd idle it."

The landowner, who already participates in FWP's Block Management Program, agreed to a year-to-year contract for three years. "The contract keeps the creek bottom from being constantly grazed," says Foster, "Eventually the grassland will need grazing or other disturbance to maintain plant vigor. But for the time being, this area will provide great nesting habitat and a nice chunk of cover for upland bird hunters."

As icing on the cake, the landowner included adjoining property in the deal so that hunters can access a full quarter-section (160 acres) of his land. "It's a win-win for everyone," Foster says.

Multiply that by hundreds of contracts and you start to see how FWP is helping cure the upland hunting blues, says Debbie Hohler, who coordinates FWP's Upland Game Bird Enhancement Program (UGBEP). The program uses upland bird hunter license dollars to pay for the various lease options. Hohler says FWP has 460 active contracts that conserve and enhance almost 355,000 acres of upland habitat. Because participants in the various options often open additional acres of their property to public access, the contracts end up producing hunting opportunities on nearly 645,000 acres.

Charlie Noland, a semi-retired veterinarian from Worden, serves on Montana's

HABITAT AND HUNTING OPTIONS Left: A seemingly bare field in winter will turn green and lush in spring and provide nesting habitat. During the cold months, upland birds hang out in the dense woody cover seen in the distance. Top: Sharp-tailed grouse also benefit from various habitat lease options. Right: A hunter and his dog probe winter cover for pheasants on a conservation lease near Conrad.

12-member Upland Game Bird Enhancement Advisory Council. He also owns land where he has established shelterbelts and pioneered the use of pollinator plant species and dense nesting cover to enhance upland bird habitat. Using UGBEP funds, FWP paid for a portion of a wildlife-friendly CRP seed mix that Noland planted. "We've seen a big increase in bird populations on our land, and we've been able to provide public access to 600 acres," he says.

The leases and upland habitat improvements like Noland's help local economies, too. "Upland bird and waterfowl hunting add about 50 million dollars to Montana's economy annually," Hohler says. "Montana has become a mecca for bird hunters. Small towns, especially in the central and eastern parts of the state, get an economic boost from the annual influx of hunters. Bird hunters spend money on food, lodging, gas, and entertainment, so local businesses roll out the welcome signs."

So does FWP. The department publishes an annual access guide to help hunters find UGBEP projects. Printed in late summer each year, the guide lists all the projects, their acreages, permission requirements, and locations (keyed to maps in the guide). "Between the information in the guide and on-the-ground signage around the projects, hunters can easily find and identify the boundaries of each area," Hohler says.

A RAMBLE ON THE PRAIRIE

On a cold day last November, I decided to see some of these areas for myself and drove north from Helena to the small town of Conrad. There I met Jake Doggett, habitat specialist for FWP's north-central region. We spent much of the afternoon in my truck, doing a windshield tour of habitat leases and Open Fields projects while Doggett explained the nuances of the agreements.

Doggett is an avid bird hunter, and his enthusiasm for his job is contagious. "Our goal is to build a strong mosaic with enough leases to provide meaningful habitat and spread hunting pressure across the landscape," he said. "Hunters sometimes look at a lease and wonder why a wheat field or other cropland is tied into it, but pheasants and other upland birds need food along with nesting cover and winter cover."

I asked him how many FWP biologists work primarily on habitat projects around the state. "We have three full-time habitat specialists in the field, in addition to the Helena staff," Doggett said. "But habitat is a primary concern for all FWP wildlife biologists statewide."

Late in the afternoon, Doggett suggested I "take my shotgun for a walk" in a snowberry-choked coulee winding through an FWP habitat lease. My Brittany, Tess, who had spent the day snoozing in her travel crate, was thrilled to go.

Not far from the truck, two rooster pheasants flushed far ahead of Tess, taking several hens with them. A bit later, just as Tess drew to a point, a small covey of Hungarian partridge jumped well ahead of her, a bit too far for a shot. Spooky birds are typical of late-season conditions, and these hardy survivors had seen plenty of hunters and learned their lessons well.

As we continued up the coulee, I noticed pheasant and sharp-tailed grouse tracks in the skiff of week-old snow, and interlacing deer tracks everywhere. Later I saw four mule deer moving out ahead, along with a snow-white jackrabbit that resembled a bolt of lightning as it zigzagged up a snowless, south-facing slope.

As Tess and I circled back toward the truck, she froze on point at the head of a small draw that branched off from the main coulee. When I stepped in front of her, a hen pheasant exploded from the grass, sending my heart into near-tachycardia. Though we didn't find a shootable rooster on our short hunt, Tess didn't seem to mind. She was just happy racing around the countryside, stretching her legs, and getting an occasional whiff of pheasant.

For my part, I was grateful to the landowner and to FWP for providing the chance to wander across this piece of grassland paradise. Bird hunting is mostly about the freedom to walk until your legs ache, and I knew that Tess and I would return to this place next fall for another try at its pheasants and partridge—a sure cure for Montana's post-CRP blues.

Interested landowners can learn more about habitat lease options by contacting Debbie Hohler at (406) 599-2531; dhohler@mt.gov.

Hunters can find the 2018 FWP Upland Game Bird Access Guide at FWP offices or online at fwp.mt.gov.

LEFT TO RIGHT: THOM BRIDGE; STEVE OEHLENSCHLAGER; THOM BRIDGE

Why on the wall?

BY TOM DICKSON

The other day I walked into a store displaying the mounts of six massive bull elk that the proprietor had killed over the years. Someone who didn't hunt big game might surely wonder what those stag heads signified. Even I, a hunter, had to stop and puzzle over why so many of us desire to obtain and then show off trophy-sized antlers.

Obsession with trophy deer and elk began in Middle Ages Europe, according to Valerius Geist, a University of Calgary professor emeritus and world-renowned expert on wild ungulate hunting. Geist once told me that European nobles lined their manor halls with mounts of huge fallow deer and red deer as a way of bragging about their estates. Abundant trophy racks signified the fertile, productive land so highly valued among the era's dukes, barons, and viscounts.

These days, a trophy elk or deer on a store or living room wall can signify many things, but it's definitely not soil fecundity. It could mean the hunter is exceptionally skilled and bagged an animal that for years eluded other, lesser hunters. It could mean the owner hired a skilled outfitter who actually did most of the hunting, leaving the client to do little more than pull the trigger. It could mean the hunter has a relative who owns prime elk property off limits to everyone except family members.

Or it could mean a mediocre hunter got lucky.

I've asked dozens of fellow hunters over the years why they want to kill a large-antlered bull or buck and hang the head on a wall. Most can't articulate a reason. Some say they chase the biggest of big game as a challenge, to test their skill. Others enjoy the extra planning, research, training, and scouting that trophy hunting requires. For some, pursuing trophy deer and elk extends time afield; if they shot the first buck or bull they saw, the season would end too soon.

Hunters aren't the only ones oohing and aahing over big antlers: Just look where the telephoto lenses point in Yellowstone National Park when vehicles pull over next to an elk herd. Most people, even those opposed to hunting, appreciate the intrinsic beauty and symmetry of antlers or the vitality and strength conveyed by a large rack.

Yet it's one thing to admire the gleaming antlers of a big buck or bull; it's something else altogether to want to kill that animal and then show it off. Or maybe not.

Everyone wants to display what makes them proud—blue ribbons, diplomas, children's artwork, handmade quilts. Antlers are no different. For some hunters, the racks are reminders of all the work and time—sometimes years—that went into a hunt. For others, the trophy is a way to pay tribute to the animal itself. In places like Montana, where hunting skill is still admired and valued, a big rack on display is a potent status symbol.

I've always been puzzled by the whole business. Though ordinarily a meat hunter who usually shoots a doe or two each season, I've also wanted to take, at least once in my life, a big whitetail buck (oddly, elk and mule deer antlers hold no interest). Too lazy to do the requisite scouting, and too unskilled in all but the most basic woodsmanship, I figured reaching that goal was highly unlikely.

Then, last year while deer hunting, I saw a big whitetail buck wander across a field of public land, within range.

Every morning since, as I look up at the deer's skull and antlers mounted on the living room wall, I experience conflicting feelings of unworthiness and accomplishment.

It's not like I did anything extraordinary to earn the trophy. I simply shot a big deer so distracted by the rut that it didn't notice my presence. Yet still I'm pleased—proud even—to have taken that buck. Weird.

My admiration for its rack may have something to do with a longing to possess a great stag's power and grace. A foolish desire, perhaps. Killing that deer didn't bestow me with its grandeur. Outdoors, I'm still the puny human I've always been, a noisy nimrod stumbling through the forest. But each time I see those antlers, I'm reminded of a moment when I felt otherwise.

I could never be that majestic buck. But—and I know this sounds silly—at least I can possess his most marvelous features. Not to mention own, for once in a long life of hunting, some bragging rights.

And that's probably as close as I will ever come to explaining why I wanted to hang a trophy deer on the wall.

Tom Dickson is editor of Montana Outdoors.

ILLUSTRATION BY STAN FELLOWS

Red squirrel

Tamiasciurus hudsonicus By Niall G. Clancy

It was the first day of deer season, and I was waiting about 100 yards from a game trail where I'd seen a nice white-tail buck the previous year. After an hour or so, I heard a small branch break. My heart pounding, I lifted my rifle, hoping to see the deer. Then I heard that incessant *chirp chirp chirp chirp chirp* familiar to all forest hunters. A red squirrel that didn't want me in its territory had busted my hiding spot. I threw the little noisemaker a nasty look before moving on. The squirrel kept chattering away and flapping its tail until I was out of sight.

IDENTIFICATION

Montana is home to only two native tree squirrels: the northern flying squirrel and the red squirrel (also known as the pine squirrel). The two other squirrels found here—the eastern fox and eastern gray—are non-natives that moved west from other states in recent decades. Red squirrels and flying squirrels generally live in coniferous forests. Gray squirrels show up mostly in city neighborhoods. Fox squirrels reside mainly along river bottoms and some city parks in the state's southeastern quarter.

Most red squirrels are red gray or red brown. Some are dark red brown and look almost black in dense, shaded forests. All red squirrels have a white underbelly and distinct white eye ring. Fox and gray squirrels are much larger and slightly lighter in color. Flying squirrels are similar to red squirrels in color but are largely nocturnal and have noticeable patagia—the parachute-like membranes that allow them to glide. Red squirrels are primarily active during the day.

RANGE AND HABITAT

Red squirrels live throughout the Rocky Mountains, as well as the northern Midwest and East. In Montana, they are absent only from the state's northeastern quadrant.

In western Montana, red squirrels mainly live in ponderosa pine and Douglas fir forests as well as stands of subalpine Engelmann spruce. In eastern Montana, they stick mainly to dry ponderosa pine forests but also thrive in urban settings where invasive fox squirrels are not present.

FEEDING

Red squirrels are opportunistic feeders that consume tree buds, flowers, mushrooms, berries, pine seeds, and even bird eggs and small nestlings. In the fall, they clip green pinecones from trees and store them in one or more large caches for winter access. Usually, some cones go uneaten and sprout into saplings. Because of this, red squirrels play an important ecological role in pine tree propagation.

While it forages over a large area, a red squirrel usually returns to a single tree before eating. A large piles of pine cones, scales, and seeds, known as a "midden," accumulates at this site, often growing over multiple squirrel generations.

LIFE CYCLE

Red squirrels mate from March through June, with several males battling over a female. After a one-month gestation, she gives birth in a woodpecker cavity or a nest of grasses and sticks nestled within a tree hollow or branches. The average litter of three kits is born hairless and blind. The mother nurses the kits for about two months before urging them to move out of the nest. Young squirrel mortality is high, with 75 percent perishing in their first year. Those that survive their first few years have long life spans relative to other squirrel species. In the wild, red squirrels live five years on average and have been documented living as long as a decade.

TERRITORIAL BEHAVIOR

Red squirrels are highly territorial—a behavior that ensures the species' survival. They fiercely defend one- to six-acre territories that have the best food sources, forcing intruders to relocate elsewhere. At 18 months, juvenile squirrels leave their mother and either find an unoccupied territory or fight to take over an occupied one.

CONSERVATION STATUS

The red squirrel is one of the most common small mammals in Montana. Populations appear to be doing well. Though it is legal to hunt them, few people do. Those interested in squirrel meat pursue the larger and better tasting fox or gray squirrels.

Writer Niall G. Clancy lives in Hamilton

DONALD M. JONES

SCIENTIFIC NAME

Tamiasciurus comes from the Greek words for "storer," "shade," and "tail." *Hudsonicus* refers to Hudson Bay, Canada, where in 1777 the first red squirrel specimens were obtained for scientific study.

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